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ANNOUNCEMENT
OF THE
MEDICAL SCHOOL
LONGWOOD AVENUE, BOSTON, MASS.
OF
HARVARD UNIVERSITY
FOR
1912-13

WITH AN ANNOUNCEMENT FOR 1913-14



PUBLISHED BY THE UNIVERSITY
1912

1912							1913													
JULY							JANUARY							JULY						
Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa
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7	8	9	10	11	12	13	5	6	7	8	9	10	11	6	7	8	9	10	11	12
14	15	16	17	18	19	20	12	13	14	15	16	17	18	13	14	15	16	17	18	19
21	22	23	24	25	26	27	19	20	21	22	23	24	25	20	21	22	23	24	25	26
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AUGUST							FEBRUARY							AUGUST						
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4	5	6	7	8	9	10	2	3	4	5	6	7	8	3	4	5	6	7	8	9
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18	19	20	21	22	23	24	16	17	18	19	20	21	22	17	18	19	20	21	22	23
25	26	27	28	29	30	31	23	24	25	26	27	28	..	24	25	26	27	28	29	30
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SEPTEMBER							MARCH							SEPTEMBER						
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8	9	10	11	12	13	14	2	3	4	5	6	7	8	7	8	9	10	11	12	13
15	16	17	18	19	20	21	9	10	11	12	13	14	15	14	15	16	17	18	19	20
22	23	24	25	26	27	28	16	17	18	19	20	21	22	21	22	23	24	25	26	27
29	30	..	..	..	..	..	23	24	25	26	27	28	29	28	29	30	..	..	..	..
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OCTOBER							APRIL							OCTOBER						
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6	7	8	9	10	11	12	6	7	8	9	10	11	12	5	6	7	8	9	10	11
13	14	15	16	17	18	19	13	14	15	16	17	18	19	12	13	14	15	16	17	18
20	21	22	23	24	25	26	20	21	22	23	24	25	26	19	20	21	22	23	24	25
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NOVEMBER							MAY							NOVEMBER						
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3	4	5	6	7	8	9	4	5	6	7	8	9	10	2	3	4	5	6	7	8
10	11	12	13	14	15	16	11	12	13	14	15	16	17	9	10	11	12	13	14	15
17	18	19	20	21	22	23	18	19	20	21	22	23	24	16	17	18	19	20	21	22
24	25	26	27	28	29	30	25	26	27	28	29	30	31	23	24	25	26	27	28	29
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DECEMBER							JUNE							DECEMBER						
1	2	3	4	5	6	7	1	2	3	4	5	6	7	..	1	2	3	4	5	6
8	9	10	11	12	13	14	8	9	10	11	12	13	14	7	8	9	10	11	12	13
15	16	17	18	19	20	21	15	16	17	18	19	20	21	14	15	16	17	18	19	20
22	23	24	25	26	27	28	22	23	24	25	26	27	28	21	22	23	24	25	26	27
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MEDICAL SCHOOL CALENDAR

1912.

- Sept. 16, Monday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 21, Saturday.* Examination in Chemistry for admission.
- Sept. 23, Monday.* **Academic Year begins.** Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 12, Saturday.* Columbus Day : a holiday.
- Nov. 1, Friday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 28, Thursday.* Thanksgiving Day : a holiday.
- Nov. 30, Saturday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

1913.

RECESS FROM DEC. 23, 1912, TO JAN. 2, 1913, INCLUSIVE

- Jan. 1, Wednesday.* Last day for receiving dissertations for the Boylston Medical Prizes.
- Jan. 15, Wednesday.* Last day for receiving applications for admission to examinations for the degrees of Ph.D. and A.M. in 1913.
- Jan. 28, Tuesday.* Mid-year Examinations begin.
- Jan. 31, Friday.* Payment of the second instalment of the tuition-fee is required on or before this date.
- Feb. 1, Saturday.* **Second half-year begins.**
- Feb. 22, Saturday.* Washington's Birthday : a holiday.
- April 1, Tuesday.* Last day for receiving dissertations for the Bowdoin Prizes.

RECESS FROM APRIL 13 TO APRIL 19, INCLUSIVE

- May 1, Thursday.* Last day for receiving applications for the Bullard Fellowships.
- May 1, Thursday.* Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.
- May 1, Thursday.* Last day for receiving applications for Scholarships for 1913-14 (except the Cheever and Hayden Scholarships).
- May 1, Thursday.* Last day for receiving applications of candidates for the degree of M.D. in 1913.
- May 30, Friday.* Memorial Day: a holiday.
- June 2, Monday.* Examinations begin.
- June 14, Saturday.* Examination in Chemistry for admission.
- June 19, Thursday.* Commencement.

SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 21,
INCLUSIVE

- Sept. 15, Monday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 20, Saturday.* Examination in Chemistry for admission.
- Sept. 22, Monday.* **Academic Year begins.** Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 13, Monday.* Columbus Day: a holiday.
- Nov. 1, Saturday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 27, Thursday.* Thanksgiving Day: a holiday.
- Dec. 1, Monday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

THE MEDICAL SCHOOL

FACULTY OF MEDICINE *

ADDRESS.†

ABBOTT LAWRENCE LOWELL, LL.B., LL.D., Ph.D., PRESIDENT,	17 Quincy St., Cambridge.
EDWARD H. BRADFORD, M.D., DEAN,	133 Newbury St.
CLARENCE J. BLAKE, M.D., <i>Walter Augustus Le- compte Professor of Otology,</i>	226 Marlborough St.
JOHN H. MCCOLLOM, M.D., S.M., <i>Professor of Con- tagious Diseases,</i>	Boston City Hospital.
ABNER POST, M.D., <i>Professor of Syphilis,</i>	16 Newbury St.
CHARLES A. BRACKETT, D.M.D., <i>Professor of Dental Pathology,</i>	Newport, R.I.
THOMAS MORGAN ROTCH, M.D., <i>Professor of Pediatrics,</i>	197 Commonwealth Ave.
EUGENE H. SMITH, D.M.D., <i>Professor of Clinical Dentistry and Orthodontia, and Dean of the Dental School,</i>	283 Dartmouth St.
WILLIAM F. WHITNEY, M.D., <i>John Barnard Swett Jackson Curator of the Warren Anatomical Museum,</i>	Harvard Medical School.
CHARLES S. MINOT, S.D., LL.D., <i>James Stillman Professor of Comparative Anatomy,</i>	Harvard Medical School.
CHARLES M. GREEN, M.D., <i>Professor of Obstetrics and Gynaecology,</i>	78 Marlborough St.
EDWARD C. BRIGGS, M.D., D.M.D., <i>Professor of Dental Materia Medica and Therapeutics,</i>	129 Marlborough St.
WILLIAM T. COUNCILMAN, M.D., LL.D., <i>Shattuck Professor of Pathological Anatomy,</i>	78 Bay State Road.
GEORGE HOWARD MONKS, M.D., M.R.C.S., <i>Pro- fessor of Oral Surgery,</i>	67 Marlborough St.
MYLES STANDISH, M.D., S.D., <i>Williams Professor of Ophthalmology,</i>	6 St. James Ave.

* Arranged, with the exception of the President and Dean, on the basis of collegiate seniority.

† The address is Boston, unless otherwise stated.

- HAROLD C. ERNST, M.D., *Professor of Bacteriology*,
Harvard Medical School.
- WILLIAM P. COOKE, D.M.D., *Professor of Prosthetic
Dentistry*, 330 Dartmouth St.
- PHILIP COOMBS KNAPP, M.D., *Clinical Instructor
in Diseases of the Nervous System*, 535 Beacon St.
- WILLIAM H. POTTER, D.M.D., *Professor of Operative
Dentistry*, 16 Arlington St.
- HERMAN F. VICKERY, M.D., *Instructor in Clinical
Medicine*, 263 Beacon St.
- GEORGE G. SEARS, M.D., *Clinical Professor of Medi-
cine*, 426 Beacon St.
- ALGERNON COOLIDGE, JR., M.D., *Professor of
Laryngology*, 613 Beacon St.
- ROBERT W. LOVETT, M.D., *Assistant Professor of
Orthopedic Surgery*, 234 Marlborough St.
- FRANZ PFAFF, M.D., *Professor of Pharmacology and
Therapeutics*, 29 Gloucester St.
- THEOBALD SMITH, M.D., LL.D., S.D., *George
Fabyan Professor of Comparative Pathology*,
Harvard Medical School.
- WILLIAM T. PORTER, M.D., LL.D., *Professor of
Comparative Physiology*, Dover.
- PAUL THORNDIKE, M.D., *Assistant Professor of
Genito-Urinary Surgery*, 24 Marlborough St.
- HORACE D. ARNOLD, M.D., *Dean of the Graduate
School of Medicine*, Harvard Medical School
- MILTON J. ROSENAU, M.D., *Professor of Preventive
Medicine and Hygiene*, 65 Naples Road, Brookline.
- FRANK B. MALLORY, M.D., *Associate Professor of
Pathology*, Harvard Medical School
- EDWARD H. NICHOLS, M.D., *Assistant Professor
of Surgical Pathology and Assistant Professor of Sur-
gery*, 294 Marlborough St.
- J. BAPST BLAKE, M.D., *Assistant Professor of Sur-
gery*, 161 Beacon St.
- HOWARD A. LOTHROP, M.D., *Assistant Professor of
Surgery*, 101 Beacon St.
- JOHN L. MORSE, M.D., *Associate Professor of Pedi-
atrics*, 70 Bay State Road.
- CHARLES A. PORTER, M.D., *Assistant Professor of
Surgery*, 254 Beacon St.

- EDWARD W. TAYLOR, M.D., *Assistant Professor of*
Neurology, 457 Marlborough St.
- RICHARD C. CABOT, M.D., *Assistant Professor of*
Clinical Medicine, 190 Marlborough St.
- DAVID L. EDSALL, M.D., *Jackson Professor of Clin-*
ical Medicine, 80 Marlborough St.
- ELLIOTT P. JOSLIN, M.D., *Assistant Professor of*
the Theory and Practice of Physic, 81 Bay State Road.
- CHARLES J. WHITE, M.D., *Assistant Professor of*
Dermatology, 259 Marlborough St.
- JAMES H. WRIGHT, M.D., S.D., *Assistant Professor*
of Pathology, Mass. General Hospital.
- HARVEY CUSHING, M.D., *Professor of Surgery,*
 305 Walnut St., Brookline.
- WILLIAM P. GRAVES, M.D., *Professor of Gynaec-*
ology, 244 Marlborough St.
- OTTO FOLIN, PH.D., *Hamilton Kuhn Professor of*
Biological Chemistry, Harvard Medical School.
- ROBERT B. GREENOUGH, M.D., *Assistant Professor*
of Surgery, 377 Beacon St.
- FRANKLIN S. NEWELL, M.D., *Assistant Professor*
of Obstetrics and Gynaecology, 379 Beacon St.
- WILLIAM H. SMITH, M.D., *Instructor in Clinical*
Medicine, 377 Beacon St.
- HUGH CABOT, M.D., *Instructor in Genito-Urinary*
Surgery, 87 Marlborough St.
- HENRY A. CHRISTIAN, M.D., *Hersey Professor of*
the Theory and Practice of Physic, 252 Marlborough St.
- JOHN L. BREMER, M.D., *Assistant Professor of His-*
tology, Harvard Medical School.
- WALTER B. CANNON, M.D., *George Higginson Pro-*
fessor of Physiology, Harvard Medical School.
- JOHN WARREN, M.D., *Assistant Professor of Anatomy,*
 Harvard Medical School.
- DAVID CHEEVER, M.D., *Demonstrator of Anatomy,* 20 Hereford St.
- FREDERIC T. LEWIS, M.D., *Assistant Professor of*
Embryology, Harvard Medical School.
- ERNEST G. MARTIN, PH.D., *Assistant Professor of*
Physiology, Harvard Medical School.
- ELMER E. SOUTHARD, M.D., *Bullard Professor of*
Neuropathology, 37 Trowbridge St., Cambridge.
- ERNEST E. TYZZER, M.D., *Assistant Professor of*
Pathology, Harvard Medical School.

- LAWRENCE J. HENDERSON, M.D., *Assistant Professor of Biological Chemistry*, Harvard Medical School.
 HOWARD T. KARSNER, M.D., *Assistant Professor of Pathology*, Harvard Medical School.
 S. BURT WOLBACH, M.D., *Assistant Professor of Bacteriology*, Harvard Medical School.
 MARSHAL FABYAN, M.D., *Instructor in Comparative Pathology*, Warren St., Brookline.
 CHANNING FROTHINGHAM, Jr., M.D., *Secretary of the Faculty of Medicine, and Assistant in the Theory and Practice of Physic*, 51 Hereford St.

FACULTY COUNCIL

- EDWARD H. BRADFORD, M.D., *Dean of the Faculty of Medicine*.
 ABNER POST, M.D., *Professor of Syphilis*.
 HAROLD C. ERNST, M.D., *Professor of Bacteriology*.
 J. BAPST BLAKE, M.D., *Assistant Professor of Surgery*.
 OTTO FOLIN, PH.D., *Hamilton Kuhn Professor of Biological Chemistry*.
 HENRY A. CHRISTIAN, M.D., *Hersey Professor of the Theory and Practice of Physic*.
 JOHN WARREN, M.D., *Assistant Professor of Anatomy*.

ADMINISTRATIVE OFFICES OF THE MEDICAL SCHOOL

The Dean's Office is in the Administration Building of the Medical School, Room 104. It is open daily from 9 to 1 and from 2 to 5, except on Saturdays, Sundays, and holidays; on Saturdays it is open from 9 to 1. Those seeking information about the Medical School should inquire at this office.

The Bursar's Office is in Dane Hall, Harvard University, Cambridge. It is open daily, except Sundays and holidays, from 9 to 1, for the receipt of fees, payments, and other financial business. A representative of the Bursar will be in the Administration Building at the Medical School at stated hours on certain days at the opening of each term for the receipt of fees from regular students.

ADMINISTRATIVE OFFICERS OF THE MEDICAL SCHOOL

President: ABBOTT LAWRENCE LOWELL, LL.B., LL.D., PH.D.

Office, 5 University Hall, Cambridge.

Dean: EDWARD H. BRADFORD, M.D.

Office, Administration Building, Medical School. Office hours, Fridays, 4 to 5 P.M.

Secretary of the Faculty: CHANNING FROTHINGHAM, JR., M.D.

Office, Administration Building, Medical School. Office hour, Mondays, 4 to 5 P.M.

Director of Scholarships: FRANKLIN DEXTER, M.D.

Office, Room 386, Building D I, Medical School. Office hours, Mondays, 2.45 to 3.15 P.M., for appointments.

Chairman of the Committee on the Degree of Doctor of Public Health:
MILTON J. ROSENAU, M.D.

Office, Room 238, Building E II, Medical School. Office hours by appointment.

Chairman of the Division of Medical Sciences of the Faculty of Arts and Sciences: WALTER B. CANNON, M.D.

Office, Room 301, Building C I, Medical School. Office hours, Mondays, 2 to 3 P.M.

Dean of the Graduate School of Medicine: HORACE D. ARNOLD, M.D.

Office hours, Thursdays, 12 M. to 1 P.M.

Secretary of the Graduate School of Medicine: FRANCIS W. PALFREY, M.D.

Office hours, Mondays and Thursdays, 4 to 5 P.M.

Chief Clerk in the Dean's Office: HELEN G. MEDBURY.

Office, Administration Building, Medical School. Office hours, from 9 to 1 and from 2 to 5 daily, except Saturdays; on Saturdays, from 9 to 1.

ADMINISTRATIVE BOARD

EDWARD H. BRADFORD, M.D. (*ex officio*), DEAN.

HAROLD C. ERNST, M.D., *Professor of Bacteriology.*

ALGERNON COOLIDGE, JR., M.D. *Professor of Laryngology.*

MILTON J. ROSENAU, M.D., *Professor of Preventive Medicine and Hygiene.*

FRANK B. MALLORY, M.D., *Associate Professor of Pathology.*

HARVEY CUSHING, M.D., *Professor of Surgery.*

ROBERT B. GREENOUGH, M.D., *Assistant Professor of Surgery.*

HENRY A. CHRISTIAN, M.D., *Hersey Professor of the Theory and Practice of Physic.*

JOHN L. BREMER, M.D., *Assistant Professor of Histology.*

JOHN WARREN, M.D., *Assistant Professor of Anatomy.*

CHANNING FROTHINGHAM, JR., M.D. (*ex officio*), *Secretary of the Faculty of Medicine and Assistant in the Theory and Practice of Physic.*

THE HARVARD MEDICAL SCHOOL

BOSTON

GENERAL STATEMENT

Three professorships of Medicine were established at the University in the years 1782 and 1783. The first degrees in Medicine were conferred in 1788. Before 1811, the degree conferred upon graduates of the School was that of BACHELOR OF MEDICINE; beginning with 1811, the degree has been DOCTOR OF MEDICINE. In 1810, the lectures given in Medicine were transferred from Cambridge to Boston, where the first MEDICAL COLLEGE was built in 1815.

The course of study required in this School for the degree of M.D. is of four years' duration. This requirement was established at the beginning of the year 1892-93.

The academic year begins on the Monday preceding the last Wednesday in September, and ends on the Thursday preceding the last Wednesday in June. In order that the time of study shall count as a full year, students of all classes must present themselves on the first day of the school year and register their names with the Secretary.

There is a Christmas recess from December 23 to January 2 inclusive, and a recess of one week's duration in April.

Beginning with the year 1899-1900 a new arrangement of the subjects taught in the first two years was adopted. During the first half of the first year the students devote their time solely to Anatomy and Histology, and during the second half of the first year to Physiology and Biological Chemistry. They devote the first half of the second year to Pathology and Bacteriology, and the remainder of the second year to a variety of subjects which more particularly prepare the student for the clinical work of the third and fourth years.

Experience has shown that this logical arrangement of the subjects of the first two years enables a student to concentrate his energies to a much greater advantage than he can when his attention is divided among several subjects. Each correlated group presents sufficient variety to avoid monotony. Another advantage of this method is that it greatly increases the amount of time which can be devoted to each subject.

In 1902 certain other changes in the curriculum were adopted, to take effect with the class entering in the autumn of that year. The new course

of study is so arranged that the first three years are devoted to prescribed work, and the fourth year entirely to elective courses. A minimum of one thousand hours' work is required of each fourth-year student; and courses are offered adapted to the student who wishes to fit himself to be a general practitioner, and also suitable courses for those who intend to become specialists or teachers in any department of medicine. The new elective curriculum of the fourth year began in the autumn of 1905.

Beginning with 1906, special students, not candidates for the degree of Doctor of Medicine, have been admitted, under certain conditions, to all courses in the School and to certain courses specially designed for them. For particulars, see page 88.

For the class entering in September, 1912, a system of general examinations was adopted. These examinations are in part written, in part oral. The first comes after two years of medical study; the second after four years. In addition there are practical examinations following each course. Every candidate for the degree of Doctor of Medicine must pass these examinations in a satisfactory manner, and also fulfil all the other requirements enumerated on page 71.

The degree of Doctor of Medicine *cum laude* is given to candidates who obtain an average of 80 per cent or over in all the required examinations.

In 1912 the Graduate School of Medicine was established to take charge of the graduate instruction throughout the entire year. This instruction formerly came under Courses for Graduates and the Summer School of Medicine.

Inquiries may be addressed to the Secretary of the Harvard Medical School, Longwood Avenue, Boston, Mass.

THE MEDICAL SCHOOL BUILDINGS AND HOSPITAL FACILITIES

In September, 1906, the Medical School moved into its new buildings, which occupy eleven acres on Longwood Avenue, Boston. The new buildings are five in number: one is designed for administrative and four for laboratory purposes. The administration building contains the necessary offices, several lecture rooms, and the Warren Anatomical Museum. The laboratory buildings provide extensive accommodations for various departments grouped in the buildings as follows:—(1) anatomy, comparative anatomy, histology, and embryology; (2) physiology, comparative physiology, biological chemistry, and theory and practice of physic; (3) pathology, bacteriology, neuropathology, and surgical pathology; (4) preventive medicine and hygiene, pharmacology, comparative pathology, and surgery.

The laboratory buildings are all constructed on one general plan, — two parallel wings united by an amphitheatre. Above each amphitheatre is a large departmental library. The rooms in the various wings have been designed on a unit system, which will greatly simplify any changes required by future growth or by uses other than those for which the rooms were originally designed. These buildings provide an equipment for teaching and research in various branches of medical science which as a whole is probably unequalled.

For the construction and endowment of these new buildings the School is indebted to the generosity of Mrs. Collis P. Huntington, Messrs. J. Pierpont Morgan, John D. Rockefeller, David Sears, and a number of other benefactors.

At the present time the clinical instruction is carried on in the wards and out-patient departments of the Massachusetts General Hospital, Boston City Hospital, Boston Lying-in Hospital, Boston Dispensary, Massachusetts Babies' Hospital, Infants' Hospital, Children's Hospital, McLean Hospital, Boston State Hospital, Psychopathic Hospital, Massachusetts Charitable Eye and Ear Infirmary, Long Island Hospital, Carney Hospital, Free Hospital for Women, Samaritan Hospital, and Collis P. Huntington Memorial Hospital. For a detailed statement of the number of patients treated in these hospitals, see pages 76-79.

The Peter Bent Brigham Hospital, for general medical and surgical cases, will be completed during the current year and its facilities will be offered for teaching.

INSTRUCTORS, LECTURERS, AND ASSISTANTS *

EDWARD COWLES, M.D., LL.D., <i>Instructor in Men- tal Diseases,</i>	ADDRESS † 419 Boylston St.
GEORGE T. TUTTLE, M.D., <i>Clinical Instructor in Mental Diseases,</i>	McLean Hospital, Waverley.
SAMUEL J. MIXTER, M.D., <i>Lecturer on Surgery,</i>	180 Marlborough St.
GEORGE H. MONKS, M.D., M.R.C.S., <i>Lecturer on Surgery,</i>	67 Marlborough St.
FRANCIS B. HARRINGTON, M.D., <i>Lecturer on Surgery,</i>	201 Beacon St.
WILLIAM F. KNOWLES, M.D., <i>Assistant in Otology,</i>	220 Clarendon St.
J. PAYSON CLARK, M.D., <i>Instructor in Laryngology,</i>	71 Marlborough St.

* Arranged on the basis of collegiate seniority.

† The address is Boston, unless otherwise stated.

- CHARLES L. SCUDDER, M.D., *Lecturer on Surgery*, 209 Beacon St.
 ELLIOTT G. BRACKETT, M.D., *Instructor in Orthopedics*, 166 Newbury St.
 WILLIAM N. SOUTER, M.D., *Fellow in Ophthalmology*, Portsmouth, N. H.
 ARTHUR K. STONE, M.D., *Instructor in the Theory and Practice of Physic*, 44 Fairfield St.
 FREDERIC C. COBB, M.D., *Instructor in Laryngology*, 11 Marlborough St.
 AUGUSTUS THORNDIKE, M.D., *Instructor in Orthopedics*, 601 Beacon St.
 JAMES G. MUMFORD, M.D., *Lecturer on Surgery*, Clifton Springs, N. Y.
 MALCOLM STORER, M.D., *Instructor in Gynaecology*, 302 Beacon St.
 LANGDON FROTHINGHAM, M.D.V., *Instructor in Bacteriology*, Harvard Medical School.
 WILLIAM E. FAULKNER, M.D., *Instructor in Surgery*, 290 Marlborough St.
 ALEXANDER QUACKENBOSS, M.D., *Instructor in Ophthalmology*, 143 Newbury St.
 EUGENE A. CROCKETT, M.D., *Instructor in Otology*, 298 Marlborough St.
 FRED B. LUND, M.D., *Lecturer on Surgery*, 527 Beacon St.
 ALFRED M. AMADON, M.D., *Assistant in Otology*, 543 Boylston St.
 JOSEPH L. GOODALE, M.D., *Instructor in Laryngology*, 258 Beacon St.
 JAMES S. STONE, M.D., *Instructor in Surgery*, 234 Marlborough St.
 ROCKWELL A. COFFIN, M.D., *Instructor in Laryngology*, 234 Clarendon St.
 PHILIP HAMMOND, M.D., *Instructor in Otology*, 483 Beacon St.
 HENRY H. HASKELL, M.D., *Instructor in Ophthalmology*, 29 Commonwealth Ave.
 HENRY F. HEWES, M.D., *Instructor in the Theory and Practice of Physic*, 125 Marlborough St.
 CALVIN G. PAGE, M.D., *Instructor in Bacteriology*, 128 Marlborough St.
 C. MORTON SMITH, M.D., *Instructor in Syphilis*, 437 Marlborough St.
 FRANKLIN W. WHITE, M.D., *Instructor in Clinical Medicine*, 322 Marlborough St.
 ERNEST A. CODMAN, M.D., *Assistant in Surgery*, 227 Beacon St.

- WILLIAM H. ROBEY, JR., M.D., *Instructor in Clinical Medicine*, 202 Commonwealth Ave.
- GEORGE S. C. BADGER, M.D., *Instructor in the Theory and Practice of Physic*, 48 Hereford St.
- HARRY A. BARNES, M.D., *Assistant in Laryngology*, 213 Beacon St.
- EDMUND W. CLAP, M.D., *Instructor in Ophthalmology*, 390 Commonwealth Ave.
- JOSHUA C. HUBBARD, M.D., *Assistant in Surgery*, 84 Bay State Road.
- DANIEL F. JONES, M.D., *Assistant in Surgery*, 195 Beacon St.
- HARRIS P. MOSHER, M.D., *Instructor in Laryngology and in Anatomy*, 828 Beacon St.
- HENRY J. PERRY, M.D., *Assistant in Bacteriology*, 636 Beacon St.
- ERNEST B. YOUNG, M.D., *Instructor in Gynaecology*, 434 Marlborough St.
- FREEMAN ALLEN, M.D., *Lecturer on Anaesthesia*, 200 Beacon St.
- SAMUEL W. ELLSWORTH, M.D., *Assistant in the Use of the Roentgen Ray*, 18 Russell Park, Quincy.
- FRED M. SPALDING, M.D., *Instructor in Ophthalmology*, 390 Commonwealth Ave.
- HOWARD T. SWAIN, M.D., *Instructor in Obstetrics*, 68 Marlborough St.
- FREDERICK S. BURNS, M.D., *Instructor in Dermatology*, 224 Marlborough St.
- LE ROI G. CRANDON, M.D., *Assistant in Surgery*, 366 Commonwealth Ave.
- HARRY F. HARTWELL, M.D., *Assistant in Surgery*, 9 Massachusetts Ave.
- WALTER C. HOWE, M.D., *Assistant in Surgery*, 303 Beacon St.
- MAYNARD LADD, M.D., *Instructor in Pediatrics*, 270 Clarendon St.
- GEORGE B. MAGRATH, M.D., *Instructor in Legal Medicine*, 274 Boylston St.
- JOSEPH H. PRATT, M.D., *Instructor in the Theory and Practice of Physic*, 317 Marlborough St.
- ROBERT SOUTTER, M.D., *Assistant in Orthopedics*, 133 Newbury St.
- DAVID H. WALKER, M.D., *Assistant in Otology*, 390 Commonwealth Ave.
- D. CROSBY GREENE, JR., M.D., *Fellow in Laryngology*, 483 Beacon St.
- ROBERT B. OSGOOD, M.D., *Assistant in Orthopedics*, 372 Marlborough St.

- CHANNING C. SIMMONS, M.D., *Assistant in Surgery*,
317 Marlborough St.
- JAMES R. TORBERT, M.D., *Assistant in Obstetrics*,
252 Marlborough St.
- FREDERICK H. VERHOEFF, M.D., *Instructor in*
Ophthalmic Pathology, 5 Euston St., Brookline.
- GEORGE A. WATERMAN, M.D., *Instructor in Neu-*
rology, 410 Beacon St.
- PERCY BROWN, M.D., *Assistant in the Use of the*
Roentgen Ray, 155 Newbury St.
- CHARLES H. DUNN, M.D., *Instructor in Pediatrics*,
178 Marlborough St.
- EDWIN A. LOCKE, M.D., *Instructor in Clinical Medi-*
cine, 311 Beacon St.
- HERMAN M. ADLER, M.D., *Instructor in Mental*
Diseases, 74 Fenwood Road.
- HORACE BINNEY, M.D., *Assistant in Genito-Urinary*
Surgery, 205 Beacon St.
- FREDERICK T. LORD, M.D., *Instructor in Clinical*
Medicine, 305 Beacon St.
- NATHANIEL R. MASON, M.D., *Assistant in Obstetrics*
and Gynaecology, 483 Beacon St.
- HENRY I. BOWDITCH, M.D., *Clinical Instructor in*
Pediatrics, 416 Marlborough St.
- ROBERT L. DENORMANDIE, M.D., *Assistant in Ob-*
stetrics, 357 Marlborough St.
- HARRY W. GOODALL, M.D., *Assistant in Biological*
Chemistry, 205 Beacon St.
- THOMAS F. LEEN, M.D., *Assistant in the Theory*
and Practice of Physic, 527 Beacon St.
- FRANCIS W. PALFREY, M.D., *Assistant in the Theory*
and Practice of Physic, 88 Beacon St.
- F. ROBERTSON SIMS, M.D., *Assistant in Neuro-*
pathology, 79 W. Foster St., Melrose.
- BETH VINCENT, M.D., *Assistant in Surgery*, 295 Beacon St.
- ZABDIEL B. ADAMS, M.D., *Fellow in Anatomy*, 86 Bay State Road.
- ALFRED W. BOSWORTH, S.B., *Assistant in Bio-*
logical Chemistry, 6 Perry St., Brookline.
- JOHN HOMANS, M.D., *Assistant in Surgery*, 164 Beacon St.
- HENRY T. HUTCHINS, M.D., *Fellow in Gynaecology*,
374 Marlborough St.
- WILLIAM B. ROBBINS, M.D., *Assistant in the The-*
ory and Practice of Physic, 356 Marlborough St.

- J. DELLINGER BARNEY, M.D., *Assistant in Genito-Urinary Surgery*, 384 Commonwealth Ave.
 HAROLD W. DANA, M.D., *Assistant in Bacteriology*, 121 Centre St., Brookline.
 CALVIN B. FAUNCE, JR., M.D., *Assistant in Otology*, 101 Newbury St.
 JOHN B. HARTWELL, M.D., *Assistant in Anatomy*, 260 Clarendon St.
 WILLIAM P. LUCAS, M.D., *Clinical Instructor in Pediatrics*, 261 Beacon St.
 EDWIN H. PLACE, M.D., *Clinical Instructor in Pediatrics*, Boston City Hospital.
 E. LAWRENCE OLIVER, M.D., *Assistant in Dermatology*, 362 Commonwealth Ave.
 FRITZ B. TALBOT, M.D., *Assistant in Pediatrics*, 100 Cottage Farm Road, Brookline.
 GEORGE H. WRIGHT, D.M.D., *Assistant in Laryngology*, 149 Newbury St.
 JAMES E. ASH, M.D., *Instructor in Pathology*, Harvard Medical School.
 GERALD BLAKE, M.D., *Assistant in Clinical Medicine*, 212 Beacon St.
 HENRY LYMAN, M.D., *Teaching Fellow in Physiology*, 36 Commonwealth Ave.
 SAMUEL T. ORTON, M.D., *Instructor in Neuropathology*, State Hospital, Worcester.
 CHARLES L. OVERLANDER, M.D., *Assistant in the Theory and Practice of Physic*, 535 Beacon St.
 G. CHEEVER SHATTUCK, M.D., *Assistant in Clinical Medicine*, 227 Beacon St.
 FREDERICK M. ALLEN, M.D., *Charles Follen Folsom Teaching Fellow in Hygiene*, 22 Peterborough St.
 WALTER M. BOOTHBY, M.D., *Assistant in Anatomy*, 508 Commonwealth Ave.
 ALBERT EHRENFRIED, M.D., *Assistant in Anatomy*, 362 Commonwealth Ave.
 ROBERT M. GREEN, M.D., *Instructor in Anatomy, Assistant in Obstetrics and Gynaecology, and Fellow in Surgery*, 78 Marlborough St.
 ROGER I. LEE, M.D., *Assistant in the Theory and Practice of Physic*, 99 Commonwealth Ave.
 EDWARD H. RISLEY, M.D., *Assistant in Anatomy*, 527 Beacon St.

- FREDERIC A. STANWOOD, M.D., *Assistant in Bacteriology*, Wellesley Hills
- PHILIP H. SYLVESTER, M.D., *Assistant in Pediatrics*, 866 Beacon St., Newton Centre.
- JAMES B. AYER, M.D., *Assistant in Neurology and Neuropathology*, 518 Beacon St.
- WILLIAM J. BRICKLEY, M.D., *Fellow in Surgery*, 47 Chestnut St., Charlestown.
- NATHAN C. FOOT, M.D., *Assistant in Pathology*, Harvard Medical School.
- ARIAL W. GEORGE, M.D., *Assistant in the Use of the Roentgen Ray*, 259 Beacon St.
- RICHARD M. SMITH, M.D., *Assistant in Pediatrics*, 329 Beacon St.
- JAMES H. YOUNG, M.D., *Fellow in Pediatrics*, 430 Centre St., Newton.
- WALTER J. DODD, M.D., *Instructor in the Use of the Roentgen Ray*, Mass. General Hospital.
- ALEXANDER FORBES, M.D., *Instructor in Physiology*, Milton.
- CHARLES H. LAWRENCE, JR., M.D., *Alumni Assistant in Clinical Medicine*, 28 Webster St., Brookline.
- EUGENE L. PORTER, A.M., *Research Fellow in Physiology*, 8 Conant Hall, Cambridge.
- WILLIAM S. WHITTEMORE, M.D., *Assistant in Anatomy*, Harvard Medical School.
- LEWIS W. HACKETT, M.D., *Assistant in Preventive Medicine and Hygiene*, 60 Crescent St., Cambridge.
- ARTHUR A. HOWARD, M.D., *Fellow in Pediatrics*, 416 Marlborough St.
- HENRY F. KEEVER, M.D., *Fellow in Pediatrics*, Auburndale.
- LOUIS H. NEWBURGH, M.D., *Alumni Assistant in the Theory and Practice of Physic*, Harvard Medical School.
- DONALD MACOMBER, M.D., *Alumni Assistant in Obstetrics*, 416 Marlborough St.
- EDWARD L. YOUNG, JR., M.D., *Assistant in Anatomy*, 216 Newbury St.
- CHESTER J. FARMER, *Assistant in Biological Chemistry*, Harvard Medical School.
- RUSSELL F. SHELDON, M.D., *Assistant in Physiology*, 227 Beacon St.
- LEONARD B. NICE, PH.D., *Teaching Fellow in Physiology*, 14 Sumner Road, Cambridge.

- LEWIS H. WEED, A.M., *Fellow in charge of the Laboratory of Surgical Research*, Harvard Medical School.
EDWIN A. BOYDEN, A.M., *Teaching Fellow in Histology and Embryology*, Harvard Medical School.
FRANCIS B. KINGSBURY, A.M., *Teaching Fellow in Biological Chemistry*, Harvard Medical School.
LAWSON G. LOWREY, A.M., *Teaching Fellow in Histology and Embryology*, 10 Park Drive, Brookline.

AUSTIN TEACHING FELLOWS

- CLEAVELAND FLOYD, M.D., *in Bacteriology*, 246 Marlborough St.
HALSEY B. LODER, M.D., *in Surgery*, Harvard Medical School.
J. HOWARD BROWN, S.M., *in Comparative Pathology*,
24 Farrington Ave., Allston.
JAMES L. MORRIS, A.M., *in Biological Chemistry*, 9 Norway St.
CHESTER H. HEUSER, A.M., *in Histology and Embryology*,
6 Park Drive, Brookline.
CHARLES M. GRUBER, A.M., *in Physiology*,
706 Huntington Ave.

THE HARVARD MEDICAL SCHOOL

ADMISSION OF STUDENTS

I. Students who have acquired from a recognized college or scientific school a degree in arts or science, following the completion of a course of at least three collegiate years, are admitted as regular students and candidates for the degree of M.D. provided they present certificates showing that they have done satisfactory work in chemistry equivalent to two college courses, with laboratory work in each amounting at least to four hours per week. These courses in chemistry should include general chemistry, organic chemistry, and qualitative analysis; some practice in making careful quantitative determinations is desirable. In case the student cannot present such certificates in chemistry he will be required to pass examinations in these subjects. Students who are not quite able to fulfil all of the requirements in chemistry may enter conditioned in chemistry; but they must make up the condition before the beginning of the second term of the first year.* Furthermore, an elementary knowledge of physics and biology is required of the student in his first general examination.

II. Candidates who present certificates showing that they have completed two years of undergraduate work at a recognized college or scientific school will be admitted as special students, provided they are able to read French or German and have taken the following college courses, with at least four hours of laboratory work per week in each. (The minimum proportion of a college year to be devoted to each is indicated.)

* It is recommended to those who propose to study medicine that they include among their studies in college certain courses which serve as a direct preparation for or are aids in the study of medicine. Such studies are:—

Chemistry as outlined under I.

Physics. A college course in experimental physics extending through the college year and including at least four hours of laboratory work per week. The laboratory work should consist largely of accurate physical measurements.

Biology. Two college courses with laboratory work in each amounting to at least four hours per week. This work should include general biology, the dissection of vertebrates, and practice in the use of the microscope and in microscopic technique.

French and German. Any courses requiring considerable practice in reading.

The courses offered by the Harvard Faculty of Arts and Sciences which fit these recommendations are as follows: Physics *C* or 1; Chemistry *A* or 1 *hf.*, 2 *hf.*, and 3; Zoölogy 1 *hf.*, 3 *hf.*, and 4 *hf.*; Botany 1 *hf.* and 2 *hf.*; together with several courses in French and German.

Physics ($\frac{1}{4}$ year or 250 hours).

General Chemistry ($\frac{1}{4}$ year or 250 hours).

Qualitative Analysis ($\frac{1}{8}$ year or 125 hours).

Organic Chemistry ($\frac{1}{8}$ year or 125 hours).

Zoölogy (which must include dissection of vertebrates and work with the microscope) ($\frac{1}{4}$ year or 250 hours).

Special students who attain an average grade within five points of the honor mark in their years of residence at the Harvard Medical School will be accepted as candidates for the degree of M.D.

ADMISSION TO ADVANCED STANDING

Students who began their professional studies in other recognized medical schools may be admitted to advanced standing and become candidates for the degree of M.D. under the following conditions:—

All persons who apply for admission to the advanced classes must furnish a satisfactory certificate of time spent in medical studies, must pass examinations and fulfil all requirements of laboratory and practical work in the branches already pursued by the class to which they seek admission, and fulfil all other requirements for admission enumerated under I. Other students who fulfil the requirements for admission enumerated under II may be admitted to advanced standing as special students provided they furnish satisfactory certificate of time spent in medical studies, pass examinations and fulfil all requirements of laboratory and practical work in branches already pursued by the class to which they seek admission. Special students admitted to advanced standing may be accepted as candidates for the degree of M.D. provided they attain an average grade within five points of the honor mark in the years of their residence at the Harvard Medical School.

A graduate of another medical school of recognized standing may obtain the degree of M.D. at this University, after a year's study in the undergraduate course, by passing all examinations and by fulfilling all requirements of laboratory and practical work required in the full undergraduate course, and by fulfilling all requirements for admission. These examinations may be taken only at the times set for the regular examinations.

Applicants for advanced standing and graduates of another medical school who have fulfilled in another recognized medical school the requirements of laboratory or practical work of a department of this School may be excused from repeating such requirements, provided the instruction which they have received is considered satisfactory by the Committee on Admission in conference with the head of the department concerned.

ADMISSION TO ADVANCED STANDING AFTER THE SESSION 1913-14 *

Both general examinations,† including the practical examinations, shall be required of every student before graduation from the Harvard Medical School, and these examinations, including practical examinations, shall be given under the supervision of the Committee on Examinations. The requirements for admission to each general examination shall be the same for those entering for advanced standing as for those regularly enrolled in the Harvard Medical School from the beginning of the first year of medical study, except that courses pursued at other recognized medical schools in character and quality equivalent to similar courses in this School will be accepted in place of these courses in this School when satisfactory evidence of having pursued such courses is presented to the Dean. No student shall be admitted to the third-year work until he has passed the first general examination, and no student shall be admitted to the second general examination who has not spent at least one year in resident study at the Harvard Medical School.

A graduate of another medical school of recognized standing may obtain the degree of M.D. at this University after a year's study in the undergraduate course, by fulfilling all the requirements for admission to the first and second general examinations, by passing these examinations, by fulfilling all requirements of laboratory and practical work required in the full undergraduate course, and by fulfilling all requirements for admission.

DIVISION OF STUDENTS

Students are divided into four classes according to their time of study and proficiency. No student may advance with his class, or be admitted to advanced standing, until he has passed the required practical examinations in the studies of the previous year, or a majority of them; nor may he become a member of the third class, until he has passed the first general examination.

No student will be permitted to continue his membership in the School, if at the beginning of his second year he has failed on all of the practical examinations on first-year subjects.

In order that the time of study shall count as a full year, students of all classes must register at the Dean's office on Monday, the first day of the academic year.

Students are required to devote themselves exclusively to the work of the School.‡

Any student may obtain a certificate of his period of connection with the School.

* These rules also apply to students who join the class that entered Sept. 23, 1912.

† See examinations, page 70.

‡ The intent of this rule is that students may not engage in hospital work during term time, except in so far as required by the School curriculum.

DIVISION OF STUDIES

DIVISION OF STUDIES

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1912-1913

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR ELECTIVES
Anatomy	Bacteriology	Materna Medica and Therapeutics	Anatomy 1, 2, 3, 4, 5, 6 and 7
Histology and Embryology	Pathology	Theory and Practice	Physiology 1 and 2
Physiology	Preventive Medicine and Hygiene	Clinical Medicine	Comparative Physiology 1 and 2
Biochemistry	<i>Materna Medica and Therapeutics</i>	Pediatrics	Biochemistry 1
	<i>Theory and Practice</i>	Surgery (written 2 hrs., practical 1 hr.)	Bacteriology 1
	<i>Clinical Medicine</i>	Clinical Surgery (written 1 hr., practical 1 hr.)	Pathology 1, 2 and 3
	<i>Surgery</i>	Obstetrics	Comparative Pathology 1, 2 and 3
		Gynaecology	Neuropathology 1 and 2
		Dermatology	Preventive Medicine and Hygiene 1
		Syphilis	Legal Medicine
		Neurology	Experimental Pharmacology.
		Psychiatry	Medicine 1, 2, 3, 4 and 5
		Ophthalmology	Tropical Medicine
		Otology	Roentgen Ray 1 and 2
		Laryngology	Pediatrics 1
		<i>Genito-Urinary Surgery</i>	
		<i>Legal Medicine</i>	

NOTE. — Subjects not completed in a given year are in *italics*. In the fourth year, electives must be chosen aggregating 1000 hours; both half-courses and quarter-courses are offered occupying 125 and 65 hours respectively.

METHODS OF INSTRUCTION

During the first three years the following methods of instruction are adopted in the several departments:—

NOTE.—The figures at the right of the page indicate as accurately as can be ascertained the number of hours of instruction which each student receives in the different courses.

ABBREVIATIONS USED IN THE FOLLOWING PAGES, AND IN THE
TABULAR VIEWS

B.C.H.	= Boston City Hospital.
B.D.	= Boston Dispensary.
B.S.H.	= Boston State Hospital (Pierce and Austin Farms).
B.L.H.	= Boston Lying-in Hospital.
Ch.H.	= Children's Hospital.
E. and E.I.	= Massachusetts Charitable Eye and Ear Infirmary.
F.H. for W.	= Free Hospital for Women.
H.M.S.	= Harvard Medical School.
I.H.	= Infants' Hospital.
L.I.H.	= Long Island Hospital.
McL.H.	= McLean Hospital.
M.G.H.	= Massachusetts General Hospital.
M.B.H.	= Massachusetts Babies' Hospital.
P.H.	= Psycopathic Hospital.
S.D.B.C.H.	= South Department, Boston City Hospital.
S.H.	= Samaritan Hospital.
S.O.P.D.	= Surgical Out-Patient Department.

Anatomy

CHARLES S. MINOT, S.D., LL.D., *James Stillman Professor of Comparative Anatomy.*

JOHN L. BREMER, M.D., *Assistant Professor of Histology.*

JOHN WARREN, M.D., *Assistant Professor of Anatomy.*

FREDERIC T. LEVY, M.D., *Assistant Professor of Embryology.*

DAVID CHEEVER, M.D., *Demonstrator of Anatomy.*

HARRIS P. MOSHER, M.D., *Instructor in Anatomy.*

ROBERT M. GREEN, M.D., *Instructor in Anatomy.*

JOHN B. HARTWELL, M.D., *Assistant in Anatomy.*

WALTER M. BOOTHBY, M.D., *Assistant in Anatomy.*

ALBERT EHRENFRIED, M.D., *Assistant in Anatomy.*

EDWARD H. RISLEY, M.D., *Assistant in Anatomy.*

WILLIAM S. WHITTEMORE, M.D., *Assistant in Anatomy.*

EDWARD L. YOUNG, Jr., M.D., *Assistant in Anatomy.*

EDWIN A. BOYDEN, A.M., *Teaching Fellow in Histology and Embryology.*

LAWSON G. LOWREY, A.M., *Teaching Fellow in Histology and Embryology.*

ZABDIEL B. ADAMS, M.D., *Fellow in Anatomy.*

CHESTER H. HEUSER, A.M., *Austin Teaching Fellow in Histology and Embryology.*

In this department instruction is given in Anatomy, Comparative Anatomy, Histology and Embryology. The department occupies the Morgan Anatomical Building, the dissecting rooms being in the wing designated BI, and the laboratories for Histology, Embryology, and Comparative Anatomy in the wing BII. There are separate rooms for fourth-year and graduate students and for various kinds of technical work. The class work is carried on by sections in unit rooms, which are well lighted, and thoroughly equipped. Each unit room measures twenty-three by thirty feet and is designed to accommodate twelve or twenty-four students. There is a large library which contains complete files of the most important anatomical and morphological journals, together with many standard works of reference, and in an adjoining room there is a collection of about ten thousand pamphlets. A card catalogue and a classified bibliography give ready access to the literature.

The laboratory offers exceptional facilities for work in human and comparative anatomy and embryology.

The Embryological Collection is a unique feature of the laboratory. It comprises over nineteen hundred series of sections of carefully selected vertebrate embryos, and affords therefore opportunities for research in comparative embryology such as cannot be found elsewhere. The collection includes fifty series of sections from human embryos, several of which are of exceptional value, among them being two of the very youngest stages of man yet obtained. The collection of embryological models contains the standard series and many unique original models.

REGULAR COURSES

First Year.—This course is intended to teach the normal gross anatomy, histology and embryology of the human body. Half of the time is devoted to work in the dissecting rooms, the other half to work in the histological and embryological laboratories. In the study of gross anatomy, each student makes a complete dissection of one side of the human body,

and all of the class dissect the same part at the same time. The general order of dissection is as follows:—body-wall; lower extremity; thoracic, abdominal and pelvic cavities; head; neck; upper extremity. The study of the skeleton is carried on with the dissection, and each student is obliged to draw carefully a certain number of selected frozen sections of the body. The lectures and demonstrations are arranged to follow closely the work in the dissecting room.

The part of the course dealing with microscopic anatomy is a study of cells, tissues, and organs, from the developmental standpoint. Cell structure and the fundamental tissues are considered first. This is followed by a study of chick embryos of 30 and 48 hours and pig embryos of 20 days, in which special stress is laid on the origin and growth of the different organs. During the remainder of the course the organs of the adult are studied in succession. In connection with the uterus, the human placenta and fetal membranes are considered. The month of January is devoted to the central nervous system and sense organs.

Fees.—Each regular medical student is charged a laboratory fee of twelve dollars, of which nine dollars is for dissecting room material, and three dollars for chemicals and microscopical sections. This laboratory fee is to be paid to the Bursar. At the beginning of the course each student is provided with a locker in the dissecting room and another in the histological laboratory. One dollar is deposited for each locker, to be repaid on returning the locker keys. At the end of the course any student who has broken or lost material belonging to the laboratory will be charged the cost of replacing the same.

Microscopes.—Every student is advised to purchase a microscope, but microscopes may be rented at four dollars for the term.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 53.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

FIRST YEAR

<i>October, November, December, and January</i>		HOURS
Lectures. Professor MINOT, Asst. Professors LEWIS, WARREN, and BREMER. <i>Eleven lectures a week, nine hours.</i>		144
Demonstrations. <i>To sections of the class, at the pleasure of the instructors.</i>		
Laboratory work. <i>Six and one-half hours five times a week.</i>		520

INVESTIGATION

Special accommodations are furnished in the laboratory for students who wish to pursue special or advanced work. Special facilities are offered to original investigators, who will receive such personal aid as may be necessary or advantageous.

A special course in vertebrate embryology is given during the second term; this has been accepted by the Faculty of Arts and Sciences, and is open to students of the academic departments.

Physiology

WALTER B. CANNON, M.D., *George Higginson Professor of Physiology.*

ERNEST G. MARTIN, Ph.D., *Assistant Professor of Physiology.*

ALEXANDER FORBES, M.D., *Instructor in Physiology.*

RUSSELL F. SHELDON, M.D., *Assistant in Physiology.*

LEONARD B. NICE, Ph.D., *Teaching Fellow in Physiology.*

HENRY LYMAN, M.D., *Teaching Fellow in Physiology.*

EUGENE L. PORTER, A.M., *Fellow in Physiology.*

CHARLES M. GRUBER, A.M., *Austin Teaching Fellow in Physiology.*

First Year. — The instruction in Physiology is based, as far as possible, on observations made by the students in laboratory experiments. The experiments are selected to impress the student with the methods and the most important facts in the various divisions of the subject. Physiological processes not readily observed in the laboratory the student learns with an insight derived from practical experience in experimentation. The arrangement of the experiments is in general such that the student first learns of what activity an organ or tissue is capable, next how certain factors condition or modify that activity, and finally what may be the effect of the activity. The experiments have also been so arranged as to place those with more general bearing first, and those with special interest later. Thus reference to previously acquired information becomes more and more possible as the course proceeds.

The amount of time devoted to laboratory exercises is approximately one hundred and sixty hours. Each student is required to preserve a record of his experiments and observations in a laboratory note-book. These records are examined and criticised.

Observations of his own experiments by the student are supplemented by more than thirty special demonstrations. These exercises, some of which are performed by students under the direction of an assistant, are closely correlated with the other objective instruction. The function of the depressor nerve, motor localization in the cerebral cortex, the action of

secretin and of enterokinase, and the effects of lymphagogues are examples of subjects which are demonstrated.

The facts observed in the laboratory and in the demonstrations are discussed in lectures and theses. The lectures, about ninety in number, are informal discussions permitting questions by the students or by the instructor. In these discussions the laboratory experiments are correlated with one another and with the body of physiological knowledge. Supplementing the lectures are the theses. A thesis in Physiology or Biological Chemistry, based upon reading of the records of original investigations, is required of each student. The Bowditch Library of Physiology and Biological Chemistry, containing about four thousand volumes and about twelve thousand reprints, is open to students for reference and reading. Theses in Physiology, which are closely related to the regular instruction, are presented before the class; in each case two students beside the reader of the thesis are selected to be prepared in some phase of the literature of the subject. These students, after the reading of the thesis, lead the discussion, which is continued by members of the class and the staff. Among the theses read publicly during the past academic year were: Color-blindness, Heart-block, Physiological economy of nutrition, Natural defenses of the organism.

In order that students shall review the work repeatedly as the course proceeds, and also that the instructors may judge the efficiency of the teaching, the class is quizzed orally every week by the instructing staff. At the end of each general division of the subject, as, for example, the nervous system, or the circulation, a written test is given. The examination books are returned, corrected, to the students. Usually five questions are asked; as examples the following are illustrative: What are the effects of stimulating the vasoconstrictor nerves of any particular organ? Cite morphological and physiological evidence for segmental arrangement of the nervous system. Discuss cortical localization.

If in the quizzes and tests many students show that certain points are not clearly understood, these points are briefly discussed again before the class. If a student reveals by his answers general failure to grasp the subject intelligently, he is personally conferred with regarding the character of his work. Such conferences are held after the first six weeks of the course, and usually result in a better understanding between the instructor and the student, and frequently in a marked improvement in the student's efforts.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 54.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

FIRST YEAR (Second half)

HOURS

Laboratory experiments. Professor CANNON, Asst. Professor MARTIN, Drs. FORBES, NICE, LYMAN, and Mr. GRUBER. <i>Daily.</i>	160
Quizzes (14). <i>One hour Saturdays.</i>	14
Written tests (5). <i>One hour Mondays.</i>	5
Lectures (90). Professor CANNON, Asst. Professor MARTIN, and Dr. FORBES.	90
Special demonstrations (30). Professor CANNON, Asst. Professor MARTIN, and Dr. FORBES.	15
Discussion of Theses (30).	22
Thesis. Written by each student from the original sources.	
Reading of investigations. The reading of investigations and the discussion of these at the appropriate conference.	

INVESTIGATION

Any student, properly qualified, who desires to engage in physiological research will be welcomed into the laboratory and will be offered every facility for research which the laboratory affords.

Comparative Physiology

WILLIAM T. PORTER, M.D., LL.D., *Professor of Comparative Physiology.*

I. *Physiological Research.* Students qualified for research will pursue their investigations under the immediate direction of the professor in charge.

II. *Comparative Physiology of Muscle.* Professor PORTER. Three hours weekly during February and March.

III. *Physiological Conference.* Professor PORTER. Demonstrations with informal discussions of selected problems in physiology. Mondays and Thursdays, 5 to 6 P.M., throughout the year.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 55.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

Biological Chemistry

OTTO FOLIN, Ph.D., *Hamilton Kuhn Professor of Biological Chemistry.*

LAWRENCE J. HENDERSON, M.D., *Assistant Professor of Biological Chemistry.*

HARRY W. GOODALL, M.D., *Assistant in Biological Chemistry.*

ALFRED WILLSON BOSWORTH, S.B., *Assistant in Biological Chemistry.*

CHESTER J. FARMER, *Assistant in Biological Chemistry.*

FRANCIS B. KINGSBURY, A.B., *Teaching Fellow in Biological Chemistry.*

JAMES LUCIEN MORRIS, A.M., *Austin Teaching Fellow in Biological Chemistry.*

FIRST YEAR

Biochemistry I. — The lectures in this course consist of a brief discussion of the theories of chemical constitution and a survey of those classes of chemical substances which are to be found in animals and plants, by Dr. HENDERSON and Mr. FARMER; and of the general principles and more important facts of physiological chemistry, by Professor FOLIN and Dr. GOODALL.

The laboratory practice is designed to acquaint the student with some of the more important constituents of living matter and their chemical behavior, and with some of the routine methods of Biochemical investigation.

Conferences and discussions of selected topics supplement the main work of the course.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 55.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

FIRST YEAR (Second half)

HOURS

Lectures. Professor FOLIN and Asst. Professor HENDERSON. *One hour five times a week.* 80

Laboratory work. Professor FOLIN, Mr. FARMER, Mr. KINGSBURY, and Mr. MORRIS. *Two and one-half hours five times a week.* 200

Bacteriology

HAROLD C. ERNST, M.D., *Professor of Bacteriology.*

S. BURT WOLBACH, M.D., *Assistant Professor of Bacteriology.*

LANGDON FROTHINGHAM, M.D.V., *Instructor in Bacteriology.*

CALVIN G. PAGE, M.D., *Instructor in Bacteriology.*

HENRY J. PERRY, M.D., *Assistant in Bacteriology.*

HAROLD W. DANA, M.D., *Assistant in Bacteriology.*

FREDERIC A. STANWOOD, M.D., *Assistant in Bacteriology.*

CLEVELAND FLOYD, M.D., *Austin Teaching Fellow in Bacteriology.*

Second Year. — Required bacteriology is taught by lectures and practical laboratory work. The lectures treat of the general subject and of methods of practical work. In the laboratory each student has an opportunity to become familiar with the simpler methods of manipulation and staining which are of especial clinical value, and with the more prominent of the pathogenic bacteria.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 55.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Lectures. Professor ERNST. <i>Daily, except Saturdays, during October and November.</i>	40
Laboratory work. Professor ERNST, and Drs. FROTHINGHAM, PAGE, PERRY, DANA, STANWOOD, and FLOYD. <i>Two to three hours daily during October and November.</i>	120

Pathology.

WILLIAM T. COUNCILMAN, M.D., LL.D., *Shattuck Professor of Pathological Anatomy.*

FRANK B. MALLORY, M.D., *Associate Professor of Pathology.*

JAMES H. WRIGHT, M.D., S.D., *Assistant Professor of Pathology.*

ERNEST E. TYZZER, M.D., *Assistant Professor of Pathology.*

HOWARD T. KARSNER, M.D., *Assistant Professor of Pathology.*

FREDERICK H. VERHOEFF, M.D., *Instructor in Ophthalmic Pathology.*

JAMES E. ASH, M.D., *Instructor in Pathology.*

NATHAN CHANDLER FOOT, M.D., *Assistant in Pathology.*

Second Year. — The course in Pathology consists of laboratory work and lectures. The basis of the laboratory work is the systematic course in pathological histology. In connection with this there are demonstrations of material bearing on the subjects studied and experiments. In this work the students are divided into small sections. The demonstrations are given to these sections and the experimental work on anaesthetized animals is carried out by the sections under the direction and supervision of Asst. Professor KARSNER, who has charge of this branch of the work. The demonstrations and experimental work are given in rooms adjoining the main laboratory which are adequately provided with apparatus. Both the demonstrations and experiments are in connection with the subjects which are being studied. Lectures are given five days in the week, the object of the lectures being rather to expand and coördinate the knowl-

edge which the student is acquiring by his study of material than to impart new information. During the entire period of the course groups of students are sent to the various hospitals to see and assist in post-mortem examinations. Each group prepares microscopical specimens of the tissues from the autopsy, which are studied under direction and described. No attempt is made to separate the subject of Pathology into general pathology and pathological anatomy, but the subject is studied as a whole. In teaching the student is taught methods of work, is given material, and directed; but he is taught to work independently. Tumors and other material coming from the surgical clinics are made full use of in the course.

On Saturday conferences and recitations are substituted for the regular laboratory work.

In the forenoons of the second and third weeks of December, Professor T. SMITH gives a course of lectures and laboratory exercises on animal parasites, particularly the protozoa and the infections produced by them.

During the afternoons of December and January two courses are given in the special pathology of neurology and surgery; the courses constitute a valuable introduction to the clinical work required in these subjects in the third year.

These courses are :—

- (a) Fifteen demonstrations and laboratory exercises on the pathology of the nervous system. (See Neurology.)
- (b) Twenty laboratory exercises in surgical pathology. (See Surgery.)

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 56.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Lectures. Professor COUNCILMAN. <i>Daily for fourteen weeks, October, November, December (first week only), and January.</i>	84
Lectures. Professor T. SMITH. <i>One hour daily, second and third weeks of December.</i>	12
Laboratory work. Professor COUNCILMAN, Assistant Professor KARSNER, and Dr. FOOT. <i>Three hours daily during the forenoons of October, November, December (first week only), and January.</i>	252
Demonstrations and laboratory work. Professor T. SMITH. <i>Two hours daily, second and third weeks of December.</i>	24
Neuropathology. Professor SOUTHARD. <i>Afternoons in December.</i>	45
Surgical Pathology. Assistant Professor NICHOLS. <i>Afternoons in January.</i>	60

Legal Medicine

GEORGE B. MAGRATH, M.D., *Instructor in Legal Medicine.*

Second Year. — (1) Demonstrations of the pathological conditions met with in death following injuries of various sorts, and in sudden death, in the post-mortem rooms of the North District Morgue and of the Massachusetts General Hospital during the forenoons of the first half-year, to sections assigned by the Pathological Department upon notification from Dr. MAGRATH.

(2) Instruction in the technique of medico-legal post-mortem examinations to be given coincidentally with (1).

Fourth Year. — Optional course; second half-year. (1) Instruction in the pathological conditions met with in death following injury, and in sudden death, by the case method, with special reference to the clinical and the medico-legal aspects in each case. Exercises based on autopsy, with discussion of the case, and held in the post-mortem rooms of the North District Morgue and of the Massachusetts General Hospital.

(2) Legal Medicine: medicine in its relation to the requirements of law. Systematic lectures (not less than twelve) dealing with matters of importance to the physician, alike as practitioner and as a witness in court.

Comparative Pathology

THEOBALD SMITH, M.D., LL.D., S.D., *George Fabyan Professor of Comparative Pathology.*

MARSHAL FABYAN, M.D., *Instructor in Comparative Pathology.*

— — —, *Assistant in Medical Zoölogy.*

J. HOWARD BROWN, S.M., *Austin Teaching Fellow in Comparative Pathology.*

Second Year. — A short course on the pathogenic protozoa and higher animal parasites is given in January as a part of the course in Pathology (see above).

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 56.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Lectures. Professor T. SMITH. (H.M.S.) *One hour daily, second and third weeks of January.* 12

Demonstrations and laboratory work. Professor T. SMITH, Assistant Professor TYZZER, and Dr. FABYAN. *Two hours daily, second and third weeks in December.* 24

Neuropathology

ELMER E. SOUTHARD, M.D., *Bullard Professor of Neuropathology.*

SAMUEL T. ORTON, M.D., *Instructor in Neuropathology.*

F. ROBERTSON SIMS, M.D., *Assistant in Neuropathology.*

JAMES B. AYER, M.D., *Assistant in Neuropathology.*

Second Year.—The course consists of lectures, laboratory work, and demonstrations, with tests, review exercises, and quizzes as required. A brief review is given of the anatomy required for grasping the pathological physiology of the nervous system. The lectures introduce conceptions of value for the third-year courses in neurology and psychiatry and for the neurological parts of courses in internal medicine and in surgery. The laboratory work is mainly histopathological, dealing with the inflammatory reactions, the classical degenerations, and (in brief) with important entities such as general paresis of the insane and tabes dorsalis. To illustrate the simpler physiological applications of the work, special demonstrations are given to the students in groups at certain State institutions.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 57.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Lectures. Professor SOUTHARD and assistants. <i>Afternoons in December.</i>	12
Laboratory work. Professor SOUTHARD and assistants. <i>Two hours daily, afternoons in December.</i>	24
Written and practical tests. Professor SOUTHARD and assistants. <i>Afternoons in December.</i>	9
Demonstrations at State institutions, voluntary. Special.	

Preventive Medicine and Hygiene

MILTON J. ROSENAU, M.D., *Professor of Preventive Medicine and Hygiene.*

LEWIS W. HACKETT, M.D., *Assistant in Preventive Medicine and Hygiene.*

FREDERICK M. ALLEN, M.D., *Charles Follen Folsom Teaching Fellow in Hygiene.*

Second Year.—The instruction consists of lectures and demonstrations.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 57.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Lectures and demonstrations. Professor ROSENAU and assistants. *Three times a week, second half-year.* 48

Materia Medica and Therapeutics

FRANZ PFAFF, M.D., *Professor of Pharmacology and Therapeutics.*

Second and Third Years.—Instruction is given by lectures and recitations, and by demonstrations of the physiological action of drugs. The lectures are supplemented by an optional course in practical pharmacy, in which the compounding of prescriptions is illustrated. In addition to the lectures on therapeutics, the practical relation of remedies to diseased conditions is dwelt on in the exercises in the departments of Theory and Practice and of Clinical Medicine.

A special laboratory has been equipped for original research in Experimental Pharmacology and Therapeutics; here a voluntary course, open to a limited number of duly qualified undergraduates, affords opportunity for practical training and instruction in the methods and use of the special apparatus employed in determining the toxic and physiological action of drugs, and their practical value as remedies.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 58.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Pharmacology lectures. Professor PFAFF. *Twice a week, February to May inclusive.* 32

Materia Medica lectures. —. *Once a week, February to May inclusive.* 16

Optional course in practical pharmacy. —. *Two hours once a week during April and May.*

THIRD YEAR

HOURS

Lectures on Therapeutics. Professor PFAFF. *Once a week, first half-year.* 16

Recitation in Pharmacology and Therapeutics. —. *Once a week, first half-year.*

Medicine

The Department of Medicine is composed of the sub-departments of the Theory and Practice of Physic and Clinical Medicine.

GEORGE G. SEARS, M.D., *Clinical Professor of Medicine.*

DAVID L. EDSALL, M.D., *Jackson Professor of Clinical Medicine.*

HENRY A. CHRISTIAN, M.D., *Hersey Professor of the Theory and Practice of Physic.*

RICHARD C. CABOT, M.D., *Assistant Professor of Clinical Medicine.*

ELLIOTT P. JOSLIN, M.D., *Assistant Professor of the Theory and Practice of Physic.*

HERMAN F. VICKERY, M.D., *Instructor in Clinical Medicine.*

WILLIAM H. SMITH, M.D., *Instructor in Clinical Medicine.*

ARTHUR K. STONE, M.D., *Instructor in the Theory and Practice of Physic.*

HENRY F. HEWES, M.D., *Instructor in the Theory and Practice of Physic.*

FRANKLIN W. WHITE, M.D., *Instructor in Clinical Medicine.*

WILLIAM H. ROBEX, JR., M.D., *Instructor in Clinical Medicine.*

GEORGE S. C. BADGER, M.D., *Instructor in the Theory and Practice of Physic.*

JOSEPH H. PRATT, M.D., *Instructor in the Theory and Practice of Physic.*

EDWIN A. LOCKE, M.D., *Instructor in Clinical Medicine.*

FREDERICK T. LORD, M.D., *Instructor in Clinical Medicine.*

THOMAS F. LEEN, M.D., *Assistant in the Theory and Practice of Physic.*

FRANCIS W. PALFREY, M.D., *Assistant in the Theory and Practice of Physic.*

WILLIAM B. ROBBINS, M.D., *Assistant in the Theory and Practice of Physic.*

GERALD BLAKE, M.D., *Assistant in Clinical Medicine.*

CHARLES L. OVERLANDER, M.D., *Assistant in the Theory and Practice of Physic.*

G. CHEEVER SHATTUCK, M.D., *Assistant in Clinical Medicine.*

CHANNING FROTHINGHAM, JR., M.D., *Assistant in the Theory and Practice of Physic.*

ROGER I. LEE, M.D., *Assistant in the Theory and Practice of Physic.*

CHARLES H. LAWRENCE, JR., M.D., *Alumni Assistant in Clinical Medicine.*

LOUIS H. NEWBURGH, M.D., *Alumni Assistant in the Theory and Practice of Physic.*

WALTER W. PALMER, M.D., *Henry P. Walcott Fellow in Clinical Medicine.*

THE THEORY AND PRACTICE OF PHYSIC

The instruction given by the Sub-Department of the Theory and Practice of Physic consists of both clinical and laboratory work. The clinical work is given by means of lectures, clinical lectures and clinical exercises at the Massachusetts General Hospital, the Boston City Hospital, the Carney Hospital, or the House of the Good Samaritan. The laboratory work is given at the Harvard Medical School in the laboratory of the Sub-Department. The laboratories are equipped for teaching routine clinical laboratory methods to the entire class, as well as for carrying on clinical or experimental medical research. Both kinds of work are offered to both undergraduate and graduate students.

Second and Third Years.—*Lectures.* Lectures on selected topics are given at the Medical School.

Clinical Lectures.—Clinical lectures in which the students are called upon to take an active part are given at the Massachusetts General Hospital.

Clinical Exercises.—Small sections of the class will be drilled in the larger hospitals and clinics in the taking of histories and in the examination of urine, blood, sputum, and gastric contents.

Laboratory.—Students will be instructed and exercised in the chemical, microscopical, and bacteriological methods used in the practice of medicine. It is expected that each student by frequent opportunity will attain the necessary proficiency to enable him to utilize these methods in the diagnosis and prognosis of disease.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 58.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Lectures on selected topics. Professor CHRISTIAN. (H.M.S.)	<i>Twice a week, second half-year.</i>	32
Clinical lectures. Dr. BADGER. (M.G.H.)	<i>Once a week, second half-year.</i>	16
Exercises in sections. Asst. Professor JOSLIN (B.C.H.), Drs. BADGER and PALFREY (M.G.H.), STONE and LEE (M.G.H. and S.H.).	<i>Twice a week, second half-year, for each student.</i>	48
Laboratory exercises. Dr. HEWES, assisted by Drs. OVERLANDER, ROBBINS, and —.	<i>Five times a week, second half-year.</i>	160

THIRD YEAR		HOURS
Lectures on selected topics. Professor CHRISTIAN. (H.M.S.)	<i>Twice a week, first half-year.</i>	32
Clinical lectures. Dr. PRATT. (M.G.H.)	<i>Once a week, first half-year; once a week, second half-year.</i>	32
Clinical lectures. Dr. HEWES. (M.G.H.)	<i>Once a week, first half-year.</i>	16
Clinical lectures. Drs. STONE, LORD, or LEE. (M.G.H.)	<i>Once a week, first half-year.</i>	16
Exercises in sections. Drs. STONE and LEE. (M.G.H. and S.H.)	<i>First half-year. Twelve exercises for each student.</i>	18

CLINICAL MEDICINE

The instruction in the Sub-Department of Clinical Medicine begins with the second half of the second year. Daily instruction is given by clinical lectures, hospital visits, and other exercises.

Second Year.—The following courses continue during the second half-year.

Physical diagnosis for the class in small sections. Every student attends two exercises a week. Credit is given for the character of the work done in this course on the basis of twenty-five per cent of the total mark in Clinical Medicine.

Clinical instruction for the entire class, twice a week, in diagnostic methods, diagnosis, and treatment.

Third Year.—Four exercises a week are held in the hospital amphitheatres. The teaching is more advanced, with greater stress on therapeutics. The amount of clinical material is so large that during the year a wide range of diseases is illustrated practically. Even of the rarer affections often several examples are shown.

Supplementary instruction is given to the class in small sections, in the ward and out-patient departments. Each student attends thirty-two exercises during the year.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 58.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Clinics. Professor EDSALL (M.G.H.) and Clinical Professor SEARS (B.C.H.). *Twice a week, second half-year.* 32

Physical Diagnosis. Drs. LORD and G. CHEEVER SHATTUCK (M.G.H.) and Dr. PALFREY (B.C.H.). *Two exercises a week, second half-year, for each student.* 48

THIRD YEAR

Clinics. Professor EDSALL. (M.G.H.) *Twice a week, first half-year; once a week, second half-year.* 48

Clinical Professor SEARS. (B.C.H.) *Twice a week, first half-year; once a week, second half-year.* 48

Drs. ROBEY, WHITE, or LOCKE. (B.C.H.) *Twice a week, second half-year.* 32

Section work. Professor EDSALL and Clinical Professor SEARS, Assistant Professor CABOT, Drs. VICKERY, ROBEY, WHITE, SMITH, and LOCKE. *Thirty-two exercises for each student throughout the year.* 48

Tropical Medicine

THEOBALD SMITH, M.D., *George Fabyan Professor of Comparative Pathology*, will supervise the instruction in Tropical Medicine. Courses which are intimately related to this field of medicine will be found under Pathology, Bacteriology, and Clinical Medicine.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 60.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

Pediatrics

THOMAS MORGAN ROTCH, M.D., *Professor of Pediatrics.*

JOHN H. MCCOLLOM, M.D., S.M., *Professor of Contagious Diseases.*

JOHN L. MORSE, M.D., *Associate Professor of Pediatrics.*

MAYNARD LADD, M.D., *Instructor in Pediatrics.*

CHARLES H. DUNN, M.D., *Instructor in Pediatrics.*

HENRY I. BOWDITCH, M.D., *Clinical Instructor in Pediatrics.*

WILLIAM P. LUCAS, M.D., *Clinical Instructor in Pediatrics.*

EDWIN H. PLACE, M.D., *Clinical Instructor in Pediatrics.*

FRITZ B. TALBOT, M.D., *Assistant in Pediatrics.*

PHILIP H. SYLVESTER, M.D., *Assistant in Pediatrics.*

RICHARD M. SMITH, M.D., *Assistant in Pediatrics.*

JAMES H. YOUNG, M.D., *Fellow in Pediatrics.*

HENRY F. KEEVER, M.D., *Fellow in Pediatrics.*

ARTHUR A. HOWARD, M.D., *Fellow in Pediatrics.*

Third Year.—The material for instruction is drawn from the Infants' Hospital, the Children's Hospital, the Massachusetts Babies' Hospital, the South Department of the Boston City Hospital, and from the Children's Departments of the Massachusetts General Hospital and the Boston Dispensary. Lectures are given on such selected topics as development, living anatomy, the dietetics of early life, diphtheria, the exanthemata, and the gastro-enteric diseases, preparatory for the clinical teaching. Clinical lectures are given at the Children's Hospital and at the Infants' Hospital; and the students are required to take an active part in the examination and discussion of the cases. Sectional teaching at the bedside both at the Children's and Infants' Hospitals is given throughout the year and comprises a large proportion of the year's instruction. Bedside instruction and clinical lectures are given at the South Department of the Boston City Hospital, where the students are shown and examine cases of diphtheria, the acute exanthemata and any other contagious diseases which happen to be in the hospital. According as the opportunity arises, the students are instructed in the technique of intubation. By means of the very large amount of Pediatric material in the contagious wards, the general subject of Pediatrics as connected with contagious diseases is especially explained and illustrated. Exercises in case teaching are given in the latter part of the year preparatory for the examination. At the Children's Hospital the students are given instruction in lumbar puncture and in the serum examinations and other diagnostic methods. In all clinical and sectional teaching especial attention is paid to clinical therapeutics.

THIRD YEAR

HOURS

Lectures. Professor ROTCH. (H.M.S.)	<i>Once a week, October 3 to December 19; January 2 to 23; January 28 to February 25; March 18 and 25.</i>	23
Associate Professor MORSE. (H.M.S.)	<i>Once a week, February 3 to March 24.</i>	8
Associate Professor MORSE. (Infants' Hospital.)	<i>Once a week, March 14 to 28. (H.M.S.) Twice a week, May 5 to 13.</i>	7
Dr. PLACE. (H.M.S.)	<i>March 4 and 11.</i>	2
Dr. LADD. (H.M.S.)	<i>March 31 and April 1.</i>	2
Dr. DUNN. (H.M.S.)	<i>April 21 and 22.</i>	2

Clinical lectures. Professor ROTCH. (Ch.H.)	<i>Once a week, October 4 to January 24.</i>	15
Professor McCOLLOM. (S.D.B.C.H.)	<i>October, November, December.</i>	8
Associate Professor MORSE. (Infants' Hospital.)	<i>Once a week, January 24 to March 7.</i>	7
Case Teaching. Dr. LADD. (H.M.S.)	<i>April 7 and 8.</i>	2
Dr. DUNN. (H.M.S.)	<i>April 28 and 29.</i>	2
Section Teaching. Dr. PLACE. (S.D.B.C.H.)	<i>First half-year. Six exercises for each student.</i>	9
DRS. LADD, DUNN, BOWDITCH, LUCAS, SYLVESTER, YOUNG, HOWARD, and KEEVER. (Ch.H. and I.H.)	<i>Each student attends twenty-one exercises during the year.</i>	31½

Roentgen Ray

WALTER J. DODD, M.D., *Instructor in the Use of the Roentgen Ray.*
 SAMUEL W. ELLSWORTH, M.D., *Assistant in the Use of the Roentgen Ray.*
 PERCY BROWN, M.D., *Assistant in the Use of the Roentgen Ray.*
 ARIAL W. GEORGE, M.D., *Assistant in the Use of the Roentgen Ray.*

Lectures and demonstrations in the use of the Roentgen Ray will be given in connection with all of the departments of the School when such instruction is desired by the head of the individual department. Arrangements can be made for such instruction with the Instructor in the Use of the Roentgen Ray.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 61.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

Surgery

The Department of Surgery is composed of the sub-departments of surgery, clinical surgery, operative surgery, surgical pathology, and genito-urinary surgery.

— — —, *Moseley Professor of Surgery.*

HARVEY CUSHING, M.D., *Professor of Surgery.*

PAUL THORNDIKE, M.D., *Assistant Professor of Genito-Urinary Surgery.*

EDWARD H. NICHOLS, M.D., *Assistant Professor of Surgical Pathology and Assistant Professor of Surgery.*

CHARLES A. PORTER, M.D., *Assistant Professor of Surgery.*

J. BAPST BLAKE, M.D., *Assistant Professor of Surgery.*

ROBERT B. GREENOUGH, M.D., *Assistant Professor of Surgery.*

HOWARD A. LOTHROP, M.D., *Assistant Professor of Surgery.*

HUGH CABOT, M.D., *Instructor in Genito-Urinary Surgery.*
WILLIAM E. FAULKNER, M.D., *Instructor in Surgery.*
JAMES S. STONE, M.D., *Instructor in Surgery.*
SAMUEL J. MIXTER, M.D., *Lecturer on Surgery.*
GEORGE H. MONKS, M.D., M.R.C.S., *Lecturer on Surgery.*
FRANCIS B. HARRINGTON, M.D., *Lecturer on Surgery.*
CHARLES L. SCUDDER, M.D., *Lecturer on Surgery.*
JAMES G. MUMFORD, M.D., *Lecturer on Surgery.*
FRED B. LUND, M.D., *Lecturer on Surgery.*
FREEMAN ALLEN, M.D., *Lecturer on Anaesthesia.*
ERNEST A. CODMAN, M.D., *Assistant in Surgery.*
JOSHUA C. HUBBARD, M.D., *Assistant in Surgery.*
DANIEL F. JONES, M.D., *Assistant in Surgery.*
LE ROI G. CRANDON, M.D., *Assistant in Surgery.*
WALTER C. HOWE, M.D., *Assistant in Surgery.*
CHANNING C. SIMMONS, M.D., *Assistant in Surgery.*
HORACE BINNEY, M.D., *Assistant in Genito-Urinary Surgery.*
BETH VINCENT, M.D., *Assistant in Surgery.*
JOHN HOMANS, M.D., *Assistant in Surgery.*
J. DELLINGER BARNEY, M.D., *Assistant in Genito-Urinary Surgery.*
ROBERT M. GREEN, M.D., *Fellow in Surgery.*
WILLIAM J. BRICKLEY, M.D., *Fellow in Surgery.*
LEWIS H. WEED, M.D., *Fellow in Charge of the Laboratory of Surgical Research.*

HALSEY B. LODER, M.D., *Austin Teaching Fellow in Surgery.*

Instruction is given by systematic lectures, demonstrations, recitations, and clinical lectures, and by section teaching in the wards and out-patient departments of the hospitals, and in the laboratories.

Second and Third Years.—A course in surgical pathology, consisting of laboratory exercises, in which are studied the healing of wounds, fractures, diseases of bones and joints, and the special pathology which is of surgical importance, is given in the month of January. A series of clinical lectures, illustrating the lesions studied in this course in the laboratory, is given at the Boston City Hospital. During the second half of the second year and in the first half of the third year the instruction consists of systematic lectures, recitations, demonstrations of surgical pathological material, and clinical demonstrations. Every week the student has four lectures, demonstrations or recitations, and four clinical exercises illustrating the lectures, demonstrations and recitations. In the first week the systematic lectures are given on surgical technique; in the second week on surgical materials and case-taking; in the third week on trauma, hemorrhage, sepsis, etc. The various subjects in surgery are taken up in successive weeks and illus-

trated contemporaneously by clinical lectures and demonstrations, until the end of the first half of the third year. As early as may be in the second half of the second year, the course in surgical technique is given. It consists of six hours of lectures to the entire class, and of twelve laboratory exercises, of two hours each, to the class in sections. The laboratory course consists of the application of bandages and surgical apparatus, and of the preparation and application of surgical dressings and materials by the students.

After the course in surgical technique the student is required to serve satisfactorily at least one month in the surgical out-patient department of the Massachusetts General Hospital or the Boston City Hospital. All the students will be assigned to serve one month during the year beginning June 1, at one or other of these hospitals. In the first half of the third year the student receives instruction in the surgical wards of the Massachusetts General and Boston City Hospitals, and also receives instruction in anesthesia. In this section teaching students have instruction on a number of selected subjects in major surgery, are brought into personal contact with the patient at the bedside, and have practical experience in the diagnosis, prognosis, and treatment of surgical cases.

A required course in genito-urinary surgery is given in the second half of the third year, consisting of sixteen lectures. In the second half of the third year the class is divided into small sections, and each student receives instruction for six hours in the out-patient departments in the details of minor genito-urinary work.

Fourth Year. — For a description of the fourth-year courses offered by this department, see page 62.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR	HOURS
Laboratory course in Surgical Pathology. Assistant Professor NICHOLS. (H.M.S.) <i>Twenty three-hour exercises during January.</i> (See Pathology.)	60
Clinical lectures in connection with the above course. Assistant Professor NICHOLS. (B.C.H.) <i>Twelve exercises during January.</i>	12
Laboratory course in Surgical Technique. Assistant Professor LOTHROP. <i>Six lectures to the entire class.</i>	6
<i>Twelve two-hour exercises for each student during second half of second year.</i>	24
Systematic lectures, demonstrations, and recitations. Professor CUSHING, Assistant Professors NICHOLS, PORTER, J. B. BLAKE, LOTHROP, and GREENOUGH. (H.M.S.) <i>Four times a week.</i>	64

Clinical demonstrations in connection with the above lectures. Professor CUSHING, and Assistant Professor PORTER (M.G.H.), and Assistant Professors J. B. BLAKE and LOTHROP (B.C.H.). *Four times a week.* 64

THIRD YEAR

Systematic lectures, demonstrations, and recitations. Professor CUSHING, Assistant Professors PORTER, J. B. BLAKE, GREENOUGH, and LOTHROP. (H.M.S.) *Three times a week, first half-year.* 48

Clinical demonstrations in connection with above lectures. Assistant Professor PORTER (M.G.H.), and Assistant Professors NICHOLS and J. B. BLAKE (B.C.H.). *Twice a week, first half-year.* 32

Clinical lectures. Assistant Professor C. A. PORTER. (M.G.H.) *Once a week, second half-year.* 16

Assistant Professors NICHOLS and J. B. BLAKE. (B.C.H.) *Once a week, second half-year.* 16

Clinical exercises in surgical wards in sections. Assistant Professor LOTHROP, and Drs. HARRINGTON, CODMAN, LUND, and CRANDON. *Each student attends sixteen exercises, first half-year.* 24

Clinical Lectures. Genito-Urinary Surgery. Assistant Professor PAUL THORNDIKE. (B.C.H.) *Once a week, second half-year.* 16

Section teaching at the Hospitals. Genito-Urinary Surgery. *Each student attends six exercises, second half-year.* 9

Case teaching. Assistant Professor J. B. BLAKE. (H.M.S.) *Once a week, beginning February 1.* 16

Orthopedics

ROBERT W. LOVETT, M.D., *Assistant Professor of Orthopedic Surgery.*

ELLIOTT G. BRACKETT, M.D., *Instructor in Orthopedics.*

AUGUSTUS THORNDIKE, M.D., *Instructor in Orthopedics.*

ROBERT SOUTTER, M.D., *Assistant in Orthopedics.*

ROBERT B. OSGOOD, M.D., *Assistant in Orthopedics.*

Third Year. — Orthopedic Surgery is taught in the first half of the third year and consists of a series of lectures and demonstrations at the Medical School, and of clinical exercises at the Children's and Massachusetts General Hospitals.

Fourth Year. — For a description of the fourth-year courses offered by this department, see page 66.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

THIRD YEAR

HOURS

Lectures and demonstrations. Orthopedic Surgery. Assistant Professor LOVETT, and Drs. BRACKETT, A. THORNDIKE, SOUTTER, and OSGOOD. (H.M.S. and Ch. H.) *Three times a week, December and January.*

20

Obstetrics and Gynaecology

CHARLES M. GREEN, M.D., *Professor of Obstetrics and Gynaecology.*

WILLIAM P. GRAVES, M.D., *Professor of Gynaecology.*

FRANKLIN S. NEWELL, M.D., *Assistant Professor of Obstetrics and Gynaecology.*

MALCOLM STORER, M.D., *Instructor in Gynaecology.*

ERNEST B. YOUNG, M.D., *Instructor in Gynaecology.*

HOWARD T. SWAIN, M.D., *Instructor in Obstetrics.*

JAMES R. TORBERT, M.D., *Assistant in Obstetrics.*

NATHANIEL R. MASON, M.D., *Assistant in Obstetrics and Gynaecology.*

ROBERT L. DENORMANDIE, M.D., *Assistant in Obstetrics.*

ROBERT M. GREEN, M.D., *Assistant in Obstetrics and Gynaecology.*

DONALD MACOMBER, M.D., *Alumni Assistant in Obstetrics.*

HENRY T. HUTCHINS, M.D., *Fellow in Gynaecology.*

OBSTETRICS

Third Year.—Instruction is given by lectures, recitations, conferences, and clinical teaching. Students are required to take charge of at least six cases of labor, under supervision and instruction, to care for their patients during the convalescence, and to make full written reports of the cases. Many of these reports are read at the conferences and discussed by the class and the instructors.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 66.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

THIRD YEAR

HOURS

Lectures on the Theory and Practice of Obstetrics. Professor GREEN. (H.M.S.) *Twice a week.* 64

Recitations. Assistant Professor NEWELL. (H.M.S.) *Once a week.* 32

Conferences. Dr. SWAIN. (H.M.S.) *Once a week.* 32

Practical instruction in Clinical Obstetrics. Drs. SWAIN, TORBERT, MASON, DENORMANDIE and MACOMBER. *Throughout the year.*

GYNAECOLOGY

Third Year. — Instruction is given by lectures, recitations, and clinical teaching. Clinics are held in the out-patient departments of the Boston City Hospital, the Boston Dispensary, and the Free Hospital for Women, and the student is instructed in diagnosis, and in the treatment of ambulatory cases.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 66.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

THIRD YEAR

HOURS

Lectures or recitations. Professors GREEN and GRAVES, Assistant Professor NEWELL, and Drs. STORER and YOUNG. (H.M.S.) *Twice a week, second half-year.* 32

Clinical exercises. Professor GRAVES (F.H. for W.), Dr. STORER (B.D.), and Drs. MASON and R. M. GREEN. (B.C.H.) *In sections, during the second half-year. Each student attends six exercises.* 9

Dermatology and Syphilis

ABNER POST, M.D., *Professor of Syphilis.*

CHARLES J. WHITE, M.D., *Assistant Professor of Dermatology.*

C. MORTON SMITH, M.D., *Instructor in Syphilis.*

FREDERICK S. BURNS, M.D., *Instructor in Dermatology.*

E. LAWRENCE OLIVER, M.D., *Assistant in Dermatology.*

DERMATOLOGY

Third Year. — A course of clinical lectures, clinical exercises, and half-hour examinations and quizzes extending throughout the year.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 67.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

THIRD YEAR

HOURS

Lectures on the Anatomy and Therapeutics of the Skin. (Illustrated.) Assistant Professor WHITE. (H.M.S. and M.G.H.) 4

Clinical lectures. Assistant Professor WHITE. (M.G.H.) *Once a week, first part of the year.* 17

Clinical exercises. Assistant Professor WHITE. (M.G.H.)	<i>Once a week, latter part of the year.</i>	12
Section work (clinical exercises). Drs. BURNS and OLIVER. (M.G.H.)	<i>Each student attends eight exercises, second half-year.</i>	16
Half-hour examinations and quizzes. Assistant Professor WHITE, and Drs. BURNS and OLIVER.	<i>Once a month throughout the year.</i>	9

SYPHILIS

Third Year. — Lectures and clinical instruction are given at the Boston Dispensary.

THIRD YEAR

Lectures. Professor POST. (H.M.S.)	<i>Once a week, December and January.</i>	8
Clinical lectures. Professor POST and Dr. SMITH. (B.D.)	<i>Once a week, April and May.</i>	8
Clinical exercises. Professor POST and Dr. SMITH. (B.D.)	<i>Each student attends six exercises, in sections, second half-year</i>	9

Neurology and Psychiatry

EDWARD W. TAYLOR, M.D., *Assistant Professor of Neurology.*

PHILIP C. KNAPP, M.D., *Clinical Instructor in Diseases of the Nervous System.*

EDWARD COWLES, M.D., LL.D., *Instructor in Mental Diseases.*

GEORGE A. WATERMAN, M.D., *Instructor in Neurology.*

HERMAN M. ADLER, M.D., *Instructor in Mental Diseases.*

GEORGE T. TUTTLE, M.D., *Clinical Instructor in Mental Diseases.*

JAMES B. AYER, M.D., *Assistant in Neurology.*

NEUROLOGY

Second Year. — In the afternoons during December, Professor SOUTHARD gives a course of twelve lectures, twelve laboratory exercises, and three tests consisting of written and practical work. The lectures form an introduction to the course in neurology and psychiatry; they precede and are directly related with the laboratory work which takes up the histology of the infections and the classical degenerations of the nervous system, as well as a brief outline of the pathology of the cerebral cortex. The histology is brought into close relation with the reflexes and other simple clinical signs. A demonstration of these reflexes and signs with their structural correlations is given at the Psychopathic and other State Hospitals.

An optional course, entitled *The Applications of Psychology to Neurology*, is offered in the course of this year.

Third Year.—During the first half-year one exercise a week and during the second half-year two exercises a week are given at the Massachusetts General Hospital. The object of the course is to give the student a first-hand knowledge of the principles of diagnosis and treatment of diseases of the nervous system. The general plan of instruction is (a) Review of the anatomy of the nervous system essential to diagnosis of organic diseases; lectures and demonstrations. (b) Pathological anatomy in its relation to diagnosis; demonstrations of stained specimens and photographs. (c) Study of cases as they present themselves at the Out-Patient Department of the Hospital and in the wards. (d) Short examinations and conferences at intervals during the year. The first half-year is devoted particularly to the study of symptoms in their clinical and anatomical relations (Assistant Professor TAYLOR); the second half-year, to morbid entities, including the functional neuro-psychoses. Dr. JAMES J. PUTNAM will give a series of lectures in the spring term on the Principles and Practice of Psycho Analysis.

Fourth Year.—For a description of the fourth-year courses offered in this department, see page 68.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

SECOND YEAR

HOURS

Lectures. Professor SOUTHARD. <i>One hour daily, afternoons in December.</i> (See Neuropathology.)	12
Laboratory work. Professor SOUTHARD. <i>Two hours daily, afternoons in December.</i> (See Neuropathology.)	24
Written and practical tests. Professor SOUTHARD. <i>Afternoons in December.</i> (See Neuropathology.)	9

THIRD YEAR

Lectures, Demonstrations, and Clinical exercises. Assistant Professor TAYLOR and Dr. WATERMAN. (M.G.H.) <i>Once a week, first half-year; twice a week, second half-year.</i>	48
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PSYCHIATRY

Third Year.—Systematic lectures are given at the Medical School during the second half-year, and clinical instruction is offered at the Psychopathic Hospital.

THIRD YEAR.

Lectures. Dr. ADLER. (H.M.S.) <i>Once a week, second half-year.</i>	16
Clinical exercises. Dr. ADLER. (P.H.) <i>At stated intervals.</i>	3-4

Ophthalmology

MYLES STANDISH, M.D., S.D., *Williams Professor of Ophthalmology.*

ALEXANDER QUACKENBOSS, M.D., *Instructor in Ophthalmology.*

HENRY H. HASKELL, M.D., *Instructor in Ophthalmology.*

EDMUND W. CLAP, M.D., *Instructor in Ophthalmology.*

FRED M. SPALDING, M.D., *Instructor in Ophthalmology.*

WILLIAM N. SOUTER, M.D., *Fellow in Ophthalmology.*

Third Year.—Instruction consists of lectures at the Medical School and of clinical exercises devoted to diagnostic methods, diagnosis, and treatment at the Massachusetts Charitable Eye and Ear Infirmary.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 69.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

THIRD YEAR

HOURS

Lectures. Professor STANDISH. (H.M.S.) *Twice a week, in October and November.* 16

Clinical exercises. Drs. QUACKENBOSS, HASKELL, CLAP, and SPALDING. (E. and E.I.) *In sections, first half-year. Twelve exercises for each student.* 18

Otology

CLARENCE J. BLAKE, M.D., *Walter Augustus Lecompte Professor of Otology.*

EUGENE A. CROCKETT, M.D., *Instructor in Otology.*

PHILIP HAMMOND, M.D., *Instructor in Otology.*

WILLIAM F. KNOWLES, M.D., *Assistant in Otology.*

ALFRED M. AMADON, M.D., *Assistant in Otology.*

DAVID H. WALKER, M.D., *Assistant in Otology.*

CALVIN B. FAUNCE, JR., M.D., *Assistant in Otology.*

Third Year.—Lectures are given at the Medical School, and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary.

Fourth Year.—For a description of the fourth-year course offered in this department, see page 69.

Graduate Courses.—For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

THIRD YEAR

HOURS

Lectures. Professor BLAKE. (H.M.S.) *Twice a week, February and March; once a week, April and May.* 24

Clinical exercises. (E. and E.I.) *Every student attends six exercises, second half-year.* 9

Laryngology and Rhinology

ALGERNON COOLIDGE, Jr., M.D., *Professor of Laryngology.*

J. PAYSON CLARK, M.D., *Instructor in Laryngology.*

FREDERIC C. COBB, M.D., *Instructor in Laryngology.*

JOSEPH L. GOODALE, M.D., *Instructor in Laryngology.*

ROCKWELL A. COFFIN, M.D., *Instructor in Laryngology.*

HARRIS P. MOSHER, M.D., *Instructor in Laryngology.*

HARRY A. BARNES, M.D., *Assistant in Laryngology.*

GEORGE H. WRIGHT, D.M.D., *Assistant in Laryngology.*

D. CROSBY GREENE, Jr., M.D., *Fellow in Laryngology.*

Third Year. — Instruction consists of lectures and demonstrations, and of training in the use of instruments. The entire class has twenty-four lectures during the second half-year. For the practical work at the Massachusetts General Hospital, the Boston City Hospital, and the Boston Dispensary, the class is divided into small sections.

Fourth Year. — For a description of the fourth-year courses offered in this department, see page 70.

Graduate Courses. — For a description of the graduate courses offered in this department, see special announcement of courses for graduates.

THIRD YEAR

Lectures. Professor COOLIDGE, assisted by Drs. GOODALE, MOSHER, and WRIGHT. (H.M.S.) *Once a week, February and March; twice a week, April and May.* 24

Clinical exercises. Professor COOLIDGE, and Drs. CLARK, BARNES, (M.G.H.), COFFIN (B.C.H.), and COBB (B.D.). *In sections, second half-year. Twelve exercises for each student.* 12

FOURTH-YEAR ELECTIVES

The electives of the fourth year are given as half-courses and quarter-courses. A half-course occupies the entire day for one month (the all-day plan) or the forenoons or the afternoons for two months (the half-day plan). Each half-course has a value of 125 hours. Quarter-courses occupy half the day for one month. Two quarter-courses equal a half-course. Eight half-courses are necessary to satisfy the requirement of one thousand hours of work demanded in the fourth year.

Students wishing to specialize in any particular branch of medical study may elect more than one of the half-courses offered in a given subject, but no student will be allowed to devote his whole year to one subject without the consent of the head of the department concerned.

When a student's research work in an elective is necessarily prolonged beyond the time elected for that subject, he will be allowed, with the permission of the Administrative Board, to make such changes in his electives as will enable him to finish his research work, provided the time required does not extend beyond the school year.

The final choice of electives must be left at the Dean's office on or before June 1. *No changes in electives will be allowed after the final assignments are made.*

The Faculty reserves the right to modify the selection of the courses chosen by any student. The *order* in which a student's electives are arranged must be determined by the Secretary of the Faculty.

A practical examination shall be given by each department. The student's credit may be based on his daily written record of work, and in part on his practical examination at the end of his course. The mark assigned must be sent immediately to the Dean's office.

FOURTH-YEAR ELECTIVES ARRANGED UNDER DEPARTMENTS

ANATOMY.

[Under this Heading are included the Courses in Anatomy, Comparative Anatomy, Embryology and Histology.]

Anatomy I. Half-courses, afternoons, October and November, February and March.

This is a course in general, applied and surgical anatomy designed to emphasize and explain such parts of general anatomy as are of practical importance. Less important details are studied briefly or omitted altogether, according to their deserts, but ample opportunity is given to the student who desires it to review the chief facts of general anatomy or to pay especial attention to regions in which he is interested.

Instruction is by demonstrations, dissection, the study of frozen sections, and specimens and informal quizzes. The greatest importance is attached to the verification by the student in his own dissection of the facts presented by the instructor.

To enable the course to be satisfactorily adjusted to courses in other departments, a limited number of students may be permitted, on consultation with the instructor, to take one month with the first section and the other month with the second section.

N. B. — No one can take this course who has not passed his first-year anatomy.

Anatomy 2. Embryology. Half-courses, mornings, afternoons, or all day, second half-year. Assistant Professor LEWIS.

An elementary knowledge of embryology, such as may be obtained from Course 1, is required. Course 5, offered by the Department of Zoölogy of Harvard College, or an equivalent course, is recommended.

In this course sixteen hours per week (at times chosen by the student) are to be spent in laboratory work. There are no lectures, but at appointed times the students meet for directions and for a thorough discussion of the specimens studied. The methods of making graphic and wax reconstructions will be taught, together with the ways of preparing drawings for publication. Reconstructions by both methods, and a certain number of drawings suitable for reproduction will be required.

The *Manual of Human Embryology*, edited by Keibel and Mall, will be used as a text-book and original publications will be consulted. At the discretion of the instructor students may have access to the extensive embryological collection and to the collection of models, many of which were made in this laboratory.

Anatomy 3. Histology. Assistant Professor BREMER. Half-course, second half-year, at hours to be arranged with the instructor.

In this course students will be required to master the principal technical methods used in histology, and to study the differences, developmental and structural, in the various organs of the animals chiefly used in experimental medicine and animal economics. Special groups of organs may be chosen by the student for examination.

Anatomy 4. Half-course, afternoons, 4-6, October and November. Structure and development of the eye, ear, and nasopharynx.

Anatomy 5. Half-course, afternoons, 4-6, October and November. Structure and development of the urogenital system.

Anatomy 6. Half-course, afternoons, 4-6, December and January. Development and histology of the nervous system.

Anatomy 7. Comparative Anatomy. Half-course, second half-year, at hours to be arranged with the instructor. Professor MINOT.

PHYSIOLOGY.

Physiology 1. Half-courses, forenoons, afternoons, or all day, first half-year; afternoons, second half-year.

Detailed study in special subjects in physiology. Such study will include preparation of bibliographies, reading of classical papers, repetition of important experiments, and reports on work accomplished.

Physiology 2. Investigation. Half-courses, forenoons, afternoons, or all day, throughout the year.

Students properly qualified, who are willing to spend sufficient time in research, will be welcomed into the laboratory and given problems to work upon. During the conduct of their investigations they will receive the counsel and guidance of other investigators working with them.

COMPARATIVE PHYSIOLOGY.

Comparative Physiology 1. Half-courses, forenoons, afternoons, or all day, throughout the year.

Students may elect work in any field of physiology. It is to be presumed that such students desire additional work in physiology to fit them for some special field of medicine, for example, the diseases of the nervous system; or they may wish to pursue physiology, pathology, or some other biological science as a profession. They will be received into the research laboratories of the department, and will carry on their studies with the personal assistance of Professor PORTER. The work will consist of fundamental experiments, the study of accessory data, and the reading of selected original investigations. The course is open to qualified persons not students in the Medical School.

Comparative Physiology 2. Physiology of the eye, the ear, and the upper respiratory tract. Afternoons, except Saturday, in December and January.

BIOCHEMISTRY.

Biochemistry 1. Half-courses, forenoons, afternoons, or all day, throughout the year.

BACTERIOLOGY.

Bacteriology 1. Half-courses, forenoons, afternoons, or all day, second half-year.

These electives will be of five kinds, including (a) instruction in methods of diagnosis depending upon bacteriological procedures; (b) instruction in methods of bacteriological diagnosis in use in health board laboratories, including the examination of waters and soils; (c) instruction in methods of opsonic-index work, with practical application; (d) special studies of spirochaetes and trypanosomes (open during both the first and second half-years, but should be taken for at least two months); (e) research work in any direction for which the student may be fitted.

Longer courses may include one or the other of these, together with a limited piece of research work.

Note: Students are advised not to take all-day courses in this subject.

PATHOLOGY.

Pathology 1. Half courses, all day, throughout the year.

Two students in the fourth year will be received in the State Infirmary at Tewksbury each month as residents. They will live in the hospital, and they will assist in all of the pathological work, receiving practical instruction in the technique pertaining to it, and will also have opportunities for the study of patients in the wards, thereby bringing the clinical course of disease and the pathological changes into close relation. Students may be received into the Danvers State Hospital for the Insane under the same conditions, with the consent of the Superintendent.

Pathology 2. Associate Professor F. B. MALLORY. Half-courses, all day, preferably second half-year.

This course is given in the pathological laboratory of the Boston City Hospital.

The work consists of (a) training in the technical methods used in pathology; (b) attendance at post-mortem examinations, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

Pathology 3. Assistant Professor J. H. WRIGHT. Half-courses, all day, second half-year.

This course is given in the pathological laboratory of the Massachusetts General Hospital.

The work consists of (a) training in the technical methods used in pathology; (b) attendance at post-mortem examinations, and the fixation and study of tissues obtained from them; (c) study of the more unusual pathological lesions; (d) research work in any line which a student demonstrates his fitness to pursue.

Each course is limited to four men.

COMPARATIVE PATHOLOGY.

Comparative Pathology 1. Half-course, afternoons, October and November, first half-year. Laboratory work, lectures and conferences. Attendance is limited to ten students.

The laboratory work will consist in a study of such infectious diseases of man and the higher animals as are reproducible at will upon the smaller animals. Each disease taken up will be studied as far as possible in the living animal with reference to the cellular reactions and the antibodies of the blood, and the secretions and excretions. The tissue changes will be studied histologically, and the chief biological and pathogenic charac-

ters of the microörganisms investigated. At the same time attention will be given to changes in the character of the diseases due to different degrees of artificially induced immunity.

Comparative Pathology 2. Medical Zoölogy. Half-course, afternoons, April and May.

This course consists of laboratory exercises and lectures on the various groups of protozoan and higher animal parasites and on insects and arachnids as carriers of infection. Qualified students may choose some special subject for detailed study. Class limited to ten students.

Comparative Pathology 3. Research. Students who have taken Course 1 or its equivalent will be admitted as research students to work upon some problem in experimental and comparative pathology for which adequate facilities can be provided. Such work may be undertaken at the convenience of the student.

NEUROPATHOLOGY.

Neuropathology 1. Half-courses, forenoons, afternoons, or all day, throughout the year, preferably the second half-year.

The case-method is followed. The report of a selected case will be worked up by the student (as if for publication), based upon the personal employment of approved neuropathological methods.

Limited to two during a given month. Consultation with the instructor in advance will secure the choice of a case in line with the student's later special work.

Neuropathology 2. Half-courses, forenoons, afternoons, or all day throughout the year.

Clinico-pathological methods in neurology and psychiatry and allied problems of internal medicine and surgery. Students taking this course may, with the consent of the authorities, serve as clinical clerks or laboratory externes in the Psychopathic Hospital or, under special conditions, in other State institutions. Students will be permitted to attend staff-conferences at the institutions where their work is carried on. They may be required to submit reports or theses concerning observations made.

The clerkships and externships are limited to two in a given month. The instructor should be consulted in advance.

PREVENTIVE MEDICINE AND HYGIENE.

Preventive Medicine and Hygiene 1. Half-course, afternoons, second half-year.

This course will consist in laboratory instruction, sanitary excursions, and, in part, of special research. The laboratory instruction will comprise analysis of air, soils, water, adulterations of foods, milk, and its relation to the public health, investigations of disinfectants, studies in immunity, vaccination, the transmission of the communicable diseases and epidemiology.

Each course limited to ten men. Students must see the instructor in charge before enrolling in this course.

THERAPEUTICS.

Experimental Pharmacology. Half-course, afternoons, December and January.

This is a laboratory course, and will consist of a series of experiments demonstrating the actions of the more important drugs upon the lower animals and will include a consideration of the therapeutic uses of the drugs studied. Adequate facilities will be provided for performing selected experiments, with the end in view of studying the effects of drugs on the circulation, respiration, gastro-intestinal tract, kidneys, etc. The students taking this course will be expected to preserve their records in a suitable laboratory book and make careful notes of their deductions from the experiments performed. Quizzes will be frequently held on the pharmacology and therapeutics of the drugs studied and some practice in prescription writing given. This course will be given in the pharmacological laboratory of the Harvard Medical School.

MEDICINE.

Fourth-Year Elective Courses in Medicine will be offered under the joint supervision of the Departments of the Theory and Practice of Physic and of Clinical Medicine as follows:

Medicine I. Half-courses, all day, throughout the year.

Instruction in clinical medicine will be given during the fourth year as follows:

1. OUT-PATIENT WORK.
2. WARD WORK.
3. TUBERCULOSIS.
4. CLINICO-PATHOLOGY.
5. PRACTICAL THERAPEUTICS.
6. DISEASES OF METABOLISM.

1. Each student will be assigned to an out-patient clinic, either at the Boston City or the Massachusetts General Hospital, where he will act as assistant to the physician on duty. In this clinic he will spend each morning from 9 to 1 or until he has finished the work allotted to him.

His work will be under the supervision of a member of the department, who will demonstrate selected cases, from the clinic, daily.

2. Each student will be assigned to a section, which will meet on one afternoon in the week in the west medical wards of the Massachusetts General Hospital, and will go on another afternoon to the Long Island Hospital. Cases will be assigned for study, and reports will be required from time to time. A member of the department will be present at these exercises to assist in the study of cases.

3. One afternoon each week will be spent in the study of Tuberculosis. Sections will be taken by Dr. E. A. LOCKE to the Municipal Hospital, Mattapan.

4. One exercise in Clinico-pathology will be given each week by a member of the department, conjointly with a member of the Pathological Department, in which the clinical history and examination of the case will be compared with the autopsy findings.

5. One hour each week will be devoted to Practical Therapeutics. The various methods used in treatment of disease will be illustrated in the west medical wards.

6. One afternoon each week will be devoted to the study of Diseases of Metabolism under Dr. FRANKLIN W. WHITE at the Boston City Hospital.

Students will be marked upon four written cases, two each from their out-patient and ward work. Each case will be marked on a scale of 20 per cent. A mark on the scale of 20 per cent will be given upon the tuberculosis work.

TABULAR VIEW

HOURL.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
A.M.	O.P.D. at B.C.H. or at M.G.H.	O.P.D. at B.C.H. or at M.G.H.	O.P.D. at B.C.H. or at M.G.H.	O.P.D. at B.C.H. or at M.G.H.	O.P.D. at B.C.H. or at M.G.H.	O.P.D. at B.C.H. or at M.G.H.
P.M.	Medical Wards at M.G.H. or ward visit at Long Island.	Tubercu- losis exercise, Municipal Hospital, Mattapan.	Metabolic diseases, Boston City Hospital.	Medical Wards at M.G.H. or ward visit at Long Island.	Practical Therapeutics, Medical Wards, at M.G.H. Clinico- pathology, Autopsy- room, M.G.H.	

Medicine 2. Quarter-courses, forenoons, throughout the year.*

This work will be given at the Carney Hospital. Each quarter-course is limited to four students. During the forenoons two students will alternate between the medical wards and the Out-patient Department of the Carney Hospital. The work will consist in a consecutive study of ambulatory and ward patients with application of appropriate laboratory methods. There will be also special opportunity for the medical observation of surgical cases before and after operation. These courses will be given under the supervision of Dr. LEEN.

Medicine 3. Half-courses, all day, throughout the year.

These courses will consist of research in the laboratory of the Department of Theory and Practice, and will be given under the direction of Dr. J. H. PRATT, with whom special arrangements for the course must be made in advance.

Medicine 4. Half-courses, afternoons, or all day, throughout the year.

These courses will consist of research in the laboratory of the Department of Theory and Practice, to be given under the direction of Dr. CHANNING FROTHINGHAM, Jr., with whom special arrangements for the course must be made in advance. This work will consist of investigation by means of animal experimentation and the study of pathological changes produced in various ways.

Medicine 5. Half-courses, forenoons, or all day, beginning October 1st.†

These courses will be given at the Massachusetts General Hospital and in the laboratory of the Department of Theory and Practice at the Medical School, and will consist of instruction in special methods of study of clinical cases, and practice in the application of these methods of clinical investigation to hospital patients. The methods which will be studied are chiefly those of chemical clinical investigation. These courses will be given under the direction of Dr. H. F. HEWES, with whom special arrangements for the course must be made in advance.

TROPICAL MEDICINE.

A course in Medical Zoölogy may be found under Comparative Pathology 2.

A course in Protozoölogy may be arranged under Pathology.

Courses in the Bacteriology of Tropical Diseases may be obtained by special arrangement.

* These courses will be repeated only the number of months required to accommodate the applicants at the rate of four per month.

† Students taking these courses may continue their work during other months of the first half-year, but no student may begin these courses later than October 1st.

ROENTGEN RAY.

Roentgen Ray 1. Half-courses, all day, throughout the year.

A complete course will be given in the application of the Roentgen Ray in diagnosis and therapeutics. Mornings from 9 A.M. to 12 M. at the Massachusetts General Hospital and Carney Hospital, Drs. WALTER J. DODD and PERCY BROWN. Afternoons from 3 to 5 P.M. at the Children's Hospital, Dr. ARIAL W. GEORGE.

Roentgen Ray 2. Quarter-courses, mornings, throughout the year.

This course is practically the same as that given in the mornings in the above course.

PEDIATRICS.

Pediatrics 1. Half-courses, all day, throughout the year.

The work will consist of instruction in the wards and out-patient departments of the Children's Hospital, of the Infants' Hospital, of the Children's Department of the Massachusetts General Hospital, in the contagious wards of the South Department of the Boston City Hospital, at the Children's Tubercular clinic of the Burroughs Place Dispensary, at the Massachusetts Babies' Hospital, and in the Children's wards and out-patient department of the Boston Dispensary. The students will be assigned to the various clinics by the Professor of Pediatrics, and the work will be under his supervision. The mornings will be taken up with teaching in the various wards and out-patient departments. There will be given two lectures on the significance of the ear in early life by Dr. CROCKETT in the wards of the Infants' Hospital. Especial instruction will be given at the Massachusetts Babies' Hospital in the examination and preparation of milk modifications in connection with substitute feeding, and here instruction will also be given in connection with the subject of wet nurses.

Four hours in each week will be spent at the South Department. Here instruction in general Pediatrics as connected with contagious diseases will be demonstrated and whenever possible the technique of intubation will be shown.

Each student will have assigned to him a case in the wards of the Children's Hospital for the purpose of making a study of that especial disease. Each student will also have cases assigned to him on two afternoons of each week, when in the early part of the afternoon instruction in physical examination will be given by the various instructors and in the latter part of the afternoon these cases will be discussed with one of the senior members of the Department. Instruction will also be given in the laboratory of the Children's Hospital in clinical work connected with lumbar puncture and with the examination of the spinal fluid, blood and urine.

Dr. GEORGE will give practical instruction by means of Roentgen plates in the normal development of early life and in the more important diseased conditions. The class will be taken to a model farm, where everything practical pertaining to the milk supply for infants and young children will be taught. In connection with this, practical instruction will be given in a research milk laboratory in the writing of prescriptions and in the routine of laboratory work.

The examination for the degree will be an oral one, held by the Professor of Pediatrics.

SURGERY.

The electives offered by the Department of Surgery consist of half-courses (occupying the whole day for one month or the mornings of two months) and quarter-courses (either mornings or afternoons for one month). They are so arranged that they may be themselves combined in different groups or taken in combination with quarter-courses offered by other departments. No student will be permitted to take more than four half-courses in surgery without special permission of the head of the department.

1	2	3	4	5	6	7	8	9
All day 1 month. B.C.H. Relief. Dresser. Practical Surgery. Oct. to May.	Forenoons 1 month. M.G.H. Observation. Oct. to May.	Forenoons. 1 month. B.C.H. Voluntary Assistant. Oct., Nov., Feb., Mar.	Afternoons. 1 month. Operative Surgery. H.M.S. Dec., Jan., Apr., May.	Forenoons. 1 month. B.C.H. G. U. Surgery. Thorndike Feb. to May.	Forenoons. 1 month. M.G.H. G. U. Surgery. Cabot. Oct. to Jan.	All day. 1 month. B.C.H. Laboratory Surgical Pathology. Nichols and Loder. Nov., Dec., Feb., Mar. 3 men only.	Afternoons. 1 month. Children's Hospital. Wards and O.P.D. Oct., Nov., Feb., Mar.	Forenoons. 2 months. M.G.H. Clinical Surgical Pathology. Oct. to May.
Half-course.	Quarter-course.	Quarter-course.	Quarter-course.	Quarter-course.	Quarter-course.	Half-course.	Quarter-course.	Half-course.

Surgery 1. Practical Work in Surgery. Half-courses, all day, for one month, throughout the year. Boston City Hospital and Relief Station.

The student will be assigned as a "dresser" and will be under the hospital administration. He will be given opportunity to take histories, make examinations and diagnoses, make dressings, assist at operations, and administer anesthesia. He will obtain abundant experience in traumatic surgery, fractures and emergency cases, and will follow the after-care and convalescence of such cases as come under his charge. He will receive instruction and will be examined from time to time in the performance of his duties by the instructor.

Surgery 2. Observation of Surgical Cases. Quarter-courses, forenoons, for one month, throughout the year. Massachusetts General Hospital.

The student will be given opportunity to study the surgical material of the hospital. Instruction will be given in case-taking, examination of patients, diagnosis, surgical treatment, and the after-care of surgical patients. Laboratory and X-ray methods of diagnosis will be demonstrated. Operations on cases previously examined by the class will be attended and the pathological material obtained from operations and autopsies will be studied. Collateral reading on surgical subjects will be required.

No student will be allowed to repeat this course except with the special permission of the head of the department.

Surgery 3. Quarter-course, forenoons, for one month, given in October, November, February, and March. Boston City Hospital.

The student will be assigned to the first surgical service of the Boston City Hospital as a "voluntary assistant" and will be under the hospital administration. He will be given practical work for two hours each morning in the wards and operating rooms, and the remaining time will be spent in the study or observation of special surgical cases or problems.

Surgery 4. Operative Surgery. Quarter-course, afternoons, for one month, December, January, April, and May. Dr. G. H. MONKS and assistants. Harvard Medical School, Laboratory of Operative Surgery and Laboratory of Surgical Research.

Instruction will be given by lecture and by demonstration on the cadaver in the classical and important operations and operative procedures, which will then be performed by the student under the supervision of the instructor. An extra charge will be made for material used in this course.

Surgery 5. Genito-Urinary Surgery. Quarter-courses, forenoons, for one month, February, March, April, and May. Assistant Professor PAUL THORNDIKE. Boston City Hospital.

Instruction will consist of ward work, taking of histories, the witnessing of and assisting at operations, the reporting of the progress of cases and seeing the end results. Conferences with the students will be held from time to time.

Surgery 6. Genito-Urinary Surgery. Quarter-courses, forenoons, for one month, October to January, inclusive. Dr. HUGH CABOT. Massachusetts General Hospital.

The student will be assigned as assistant in the clinic and will take part in the routine work, case-taking, examination of patients, diagnosis and treatment. Operations and the after-care of major operative cases will be followed in the wards. Instruction will be given in cystoscopy and in laboratory methods of diagnosis. (Courses 5 and 6 may be taken together as a half-course in Genito-Urinary Surgery.)

Surgery 7. Half-courses, all day except Saturdays and Sundays, for one month, November, December, February, and March. Assistant Professor E. H. NICHOLS and Dr. H. B. LODER. Boston City Hospital and Laboratory of Surgical Pathology.

This course will include ward visits, operations, etherization, microscopy and examination of pathological specimens from operations at the Boston City Hospital. The afternoons will be spent at the Laboratory of Surgical Pathology at the Harvard Medical School. The instruction will include experimental operations along pathological lines suggested by the instructors, with compilation of literature and interpretation of operative results. Limited to three men. Suitable students will be permitted to repeat the course. With the special permission of the instructor this course may be taken by three additional men as a quarter-course, occupying the afternoons of one month.

Surgery 8. Quarter-courses, afternoons, for one month, October, November, February, and March. Dr. JAMES S. STONE and assistants. Children's Hospital.

The general surgical diseases of children, fractures, infections, hernia, congenital malformations, etc. The student will be assigned cases in the surgical out-patient department and in the wards of the hospital for examination and diagnosis. Treatment will be discussed with the instructor. Opportunity will be given to qualified students to do practical work as dressers, Monday, Tuesday, Wednesday and Saturday afternoons in the out-patient department; Thursday and Friday afternoons the class will meet in the wards and operating rooms of the hospital.

Surgery 9. Clinical Surgical Pathology. Half-courses, forenoons, for two months, throughout the year. Dr. W. F. WHITNEY. Massachusetts General Hospital.

The course will be devoted to the study of pathological specimens from the surgical clinic, with especial reference to the use of the microscope in immediate diagnosis. Opportunity will be offered for the systematic study of some particular line of cases, both clinically and pathologically. The work will be supplemented with conferences and demonstrations in the Warren Museum. Each student will be expected to supply himself with a microscope.

ORTHOPEDIC SURGERY.

Orthopedic Surgery 1. Half-courses, afternoons, throughout the year.

The fourth-year elective course is planned to continue the third-year required course, and is suited to those who have had some acquaintance with orthopedic surgery. The exercises are clinical, combined with practical work in the out-patient orthopedic clinics and in the in-service of the Children's Hospital and in the in-service of the Massachusetts General Hospital. The instruction is given daily each afternoon in the week, and is so arranged that opportunities are given for the examination of cases, with systematic note taking, followed by instruction successively in symptoms, diagnosis, the principles and details of treatment, including instruction in the common operations of orthopedic surgery.

Each course limited to five men.

Orthopedic Surgery 2. Quarter-course, afternoons, October, December, February, and April.

Full courses are offered for those who desire and are qualified for more complete instruction. The large amount of clinical material under the direction of the department gives ample opportunity for study and investigation.

Each course limited to four men.

OBSTETRICS AND GYNAECOLOGY.

Obstetrics and Gynaecology 1. Obstetrics. Half-courses, all day, throughout the year.

The course will be given at the Boston Lying-in Hospital and at the Medical School. During the first half of the course the student will lodge at the Hospital, and devote his time chiefly to attendance on cases in the out-patient clinic; he will also be called upon to assist at operations, and, when his other duties permit, to make ward visits with the physician on

duty. In the second half of the course he will conduct the convalescence of the cases delivered by him during his resident service, write full reports of his cases, and make daily ward visits, receiving clinical instruction on house patients, and witnessing operations. In his clinical work he will have the supervision and instruction of the Department and of the Hospital Staff on duty. In the first half of his course he will also be given, at the Medical School, a course of demonstrations in operative obstetrics, and each student will practise the various operations on the manikin.

Obstetrics and Gynaecology 2. Gynaecology. Half-courses, forenoons, throughout the year.

The courses will be given by Professor GREEN (Oct. to Jan.) and Assistant Professor NEWELL (Feb. to May), assisted by Drs. YOUNG, MASON, and R. M. GREEN, in the wards and out-patient department of the Gynaecological Service at the Boston City Hospital, and by Professor GRAVES, assisted by Dr. HUTCHINS, at the Free Hospital for Women, Brookline. These clinics afford ample material for a comprehensive study of gynaecology, from the simpler lesions requiring only minor local treatment or the various plastic operations, to the major cases treated by capital operation. Students will be given opportunity to educate the touch, and will be instructed in diagnosis and in the methods of minor treatment. The various operations, major and minor, will be demonstrated, and opportunity given to study convalescence and post-operative treatment. Students will also be required to study, and report on, pathological specimens removed by operation, under the supervision of Professor MALLORY or Professor GRAVES.

Cases will be assigned for history-taking, examination, diagnosis, with notes on operation and subsequent treatment. As far as possible students will be expected to assist in clinical work.

DERMATOLOGY AND SYPHILIS.

Dermatology and Syphilis 1. Half-courses, forenoons, October, November, December, and January.

Instruction in clinical dermatology will be given at the Massachusetts General Hospital, both in the out-patient department and in the ward for skin diseases. Instruction will also be given in the histology and pathology of the skin, with training in the preparation of microscopical preparations and in histological technique. Students electing Course 1 or 2 are strongly recommended to elect Course 3.

Dermatology and Syphilis 2. Quarter-courses, forenoons, October, November, December, and January.

The work in this course will be the same as in Course 1, with the exception that it extends over one month instead of two.

Dermatology and Syphilis 3. Quarter-courses, afternoons, in January or in February, but not in both months.

This course consists of microscopical work and is given on five afternoons at the Harvard Medical School. Students electing this course will be trained in microscopical technique and in the histological study of the commoner diseases of the skin.

NEUROLOGY AND PSYCHIATRY.

Neurology and Psychiatry 1. Half-courses, forenoons, throughout the year.

The design of these courses is to continue the work of the third year in its practical relations. The aim will be to give the student an opportunity for the independent study of cases. To this end the following methods of instruction in general will be adopted:—

The instruction in neurology will be as follows:—

- (1) Daily systematic conferences on neurological topics.
- (2) History-taking, and personal examination of patients at the out-patient departments of the Massachusetts General and Boston City Hospitals.
- (3) Assistance in the clinic, both in the general examination of patients and in treatment, especially by means of electricity.
- (4) The detailed preparation of reports bearing on the subjects studied, and such original investigation as the time permits. A study of the literature bearing on special topics apart from text-books is urgently advised.
- (5) Visits will also be made to institutions in the neighborhood of Boston as opportunity offers, *e. g.*, Massachusetts School for Feeble-Minded, Long Island Hospital, Boston Harbor.

In the final marking much account will be taken of the daily practical work of the student.

The instruction in psychiatry will be as follows:—

- (1) A conference, one evening each week, for the review and further study of the cases seen at the clinics and of other cases, and for the discussion of special subjects.
- (2) Clinical instruction at the McLean Hospital one forenoon in each week. This will include attendance at the regular conferences of the Medical Staff, at which there is a careful discussion of every case on its admission to the Hospital, with the study of its history, diagnosis, prognosis, and treatment. This exercise will be followed by a visit to the wards and the examination, as far as practicable, of the cases discussed at the conferences and of other selected cases.
- (3) Clinical instruction and demonstrations at the Boston State Hospital one forenoon in each week during October and November, for all electing

this course. Also an individual case will be assigned to be reported and discussed at the regular evening conference during the year.

The foregoing statement is subject to possible modifications.

OPHTHALMOLOGY.

Ophthalmology 1. Half-courses, forenoons, second half-year.

The work will consist of personal instruction in the methods of examination of the refraction of the eye and the use of the ophthalmoscope and other instruments of precision. An opportunity will be given to work in the out-patient department of the Massachusetts Charitable Eye and Ear Infirmary and to observe and study cases in the wards. In addition there will be instruction in ophthalmic operations, with opportunity to witness their exemplification in the operative work of the hospital.

Ophthalmology 2. Quarter-course, forenoons, in February.

This course will be devoted to instruction in the use of the ophthalmoscope.

OTOLOGY.

Otology 1. Half-courses, forenoons, throughout the year.

For men who elect but one half-course, the work will consist chiefly of clinical training and instruction, hearing tests, and objective examinations and manipulations in the out-patient, house, and operating services of the Massachusetts Charitable Eye and Ear Infirmary.

For men especially interested in Otology, who wish to devote all their time to the subject, a thorough course of instruction has been planned embracing the anatomy, physiology, and pathology of the ear, in addition to clinical instruction. Each course limited to three men.

Otology 2. Otoscopy and Diagnosis. Drs. D. H. WALKER and A. M.

AMADON. Quarter-courses, forenoons, November, December, February or March.

This course will be given at the Massachusetts Charitable Eye and Ear Infirmary. The student will be instructed in the objective examination of the ear, in making hearing tests and in the determination of disturbances of equilibration. He will be given an opportunity to make diagnoses in a great variety of cases. Each course limited to three men.

Otology 3. Histology and Pathology of the Ear. Dr. A. M. AMADON.

Quarter-course, mornings in January, for students who have taken either Course 1 or 2.

This course will be given at the Medical School. Instruction will consist of directed reading, illustrated by specimens, and in laboratory work

under the personal supervision of the instructor. Ability to read German is necessary. Each course limited to three men.

LARYNGOLOGY.

Laryngology 1. Quarter-courses, forenoons, throughout the year, except March. Massachusetts General Hospital.

These courses are chiefly clinical in character; but in addition to the routine work of the clinic, instruction will be given in diagnosis, treatment, and applied anatomy and pathology, as well as an opportunity to assist at operations. Each student is required to follow and report on some special selected subject.

Each course limited to four and preference will be given to men taking the course for two months.

Laryngology 2. Quarter-courses, mornings, second half-year.

This course is similar to Laryngology 1.

Laryngology 3. Pathology of the Nose and Throat. Drs. JOSEPH L. GOODALE and HARRY A. BARNES. Quarter-course given in March. Daily, afternoons, except Saturdays, in the Pathological Building of the Harvard Medical School.

The course is designed to afford students a practical acquaintance with the characteristic histological alterations in the more important diseases of the nose and throat. Sections are stained and mounted by the student and retained by him as a collection to serve as a basis for the translation of clinical descriptive terms into their histological equivalents. The histological material is selected and prepared with special reference to clinical diagnosis and treatment. In connection with this course a student should have taken Laryngology 1.

EXAMINATIONS

There will be two kinds of examinations, general and practical. Two general examinations, each both oral and written, will be required of the candidate for the M.D. degree, the first after the completion of the second year, and the second after the completion of the fourth year of medical study. Practical examinations will be held in the various subjects of the curriculum.

For the first general examination the student may choose either June or September, but no student will be admitted to this examination until he has completed the courses included in the examination, and has passed practical examinations in these various courses. The subjects comprised in the first general examination will be Anatomy, Histology and Embry-

ology, Physiology, Biological Chemistry, Pathology and Bacteriology. This examination further shall assume and require an elementary knowledge of Physics, Inorganic and Organic Chemistry, and Biology.

For the second general examination the student may choose either June or January, but no student will be admitted to this examination until he has passed satisfactorily the first general examination, has completed four years of medical study in four different calendar years, including at least one year of resident study at the Harvard Medical School, has completed the courses included in this examination, and has passed practical examinations in these courses. The subjects comprised in the second general examination will be Preventive Medicine and Hygiene, Materia Medica and Therapeutics, Medicine, Surgery, Pediatrics, Obstetrics, Gynaecology, Dermatology, Syphilis, Neurology, Psychiatry, Ophthalmology, Otology and Laryngology.

No student who has failed to pass a general examination will be permitted to repeat the examination within the calendar year in which he failed. Any student who fails three times in a general examination will be debarred from further attempts.

The practical examinations will be conducted by the several Departments, and the student may choose whether he will take the practical examinations at the end of each course, or near the time of the general examination.

In addition to the above examinations every student is required:—

To dissect the three parts of the body to the satisfaction of the demonstrator;

To receive practical instruction in anaesthesia;

To present a certificate that he has satisfactorily served as a surgical dresser in the surgical out-patient department of the Massachusetts General Hospital or Boston City Hospital for at least one month after taking the course in surgical technique in the second half of the second year;

To take charge of and report on six cases in Obstetrics, under supervision and instruction.

To furnish satisfactory evidence of having engaged in the practical exercises in Theory and Practice.

No student is allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty.

After two failures to pass in any subject, a student must give notice twenty-four hours in advance, at the Dean's office, of his intention to take each subsequent examination in that subject, and pay a charge of three dollars.

DEGREES

Degree of Doctor of Medicine

Every candidate for the degree of DOCTOR OF MEDICINE at this University must be at least twenty-one years of age, and of good moral character. He must fulfil all the requirements for admission to this Medical School; must give evidence of having studied in a recognized Medical School at least four full years, of which one year must be spent at this School; must pass all the required examinations, and fulfil satisfactorily the special requirements enumerated above.

The degree of Doctor of Medicine will be given to those candidates who fulfil the above requirements. The degree of Doctor of Medicine *cum laude* will be given to candidates who have obtained an average of eighty per cent, or over, in all the required examinations.

Candidates for the degree must make application for it in writing, on blanks furnished at the Dean's office, on or before *May 1* of the year in which they propose to graduate.

Candidates for the degree of Doctor of Medicine are not required to present a thesis; but they may present a voluntary thesis which, if of conspicuous merit, may receive honorable mention; if the thesis is also of a suitable character, it may be read at the Commencement exercises. Theses must be completed and delivered to the Dean on or before *the first day of May*.

A graduate of another Medical School of recognized standing may obtain the degree of Doctor of Medicine at this University by fulfilling all the requirements for undergraduates above mentioned, but he may take the examination in any subject only at the times when regularly it is held.

Degree of Doctor of Public Health

The degree of Doctor of Public Health is open to holders of the degree of Doctor of Medicine from the Harvard Medical School or other recognized Medical Schools, and to other properly qualified persons. Candidates for the degree of Doctor of Public Health must spend not less than one year in work upon a special subject, approved by the Committee on the Degree of Doctor of Public Health, and present a thesis containing some original research acceptable to the Faculty of Medicine. Candidates for this degree may be given credit for any course offered in any department of the University, provided it has the approval of the Faculty of Medicine, and candidates from other institutions may be admitted to advanced standing. A minimum of one year in residence shall be required of all candidates for the degree of Doctor of Public Health. Information in regard to this degree may be had from Professor M. J. ROSENAU, Chairman of the Committee on the Degree of Doctor of Public Health.

Degrees of Master of Arts and Doctor of Philosophy

The degree of MASTER OF ARTS is open to graduates of the Harvard Medical School who are also Bachelors of Arts of Harvard College, and to Bachelors of Arts of other Colleges who shall be recommended by the Faculty of Arts and Sciences of Harvard College. Candidates must pursue an approved course of study in Medicine for at least one year after taking the degree of Doctor of Medicine. Applications for approval of the course of study offered for this degree must be made to the Administrative Board of the Graduate School of Arts and Sciences on or before the *fifteenth day of January*. See page 580, University Catalogue for 1911-12, for the conditions of candidacy for the degree of Master of Arts, and for the requirements of the Faculty of Arts and Sciences for this degree.

There has been established within the Faculty of Arts and Sciences a Division of Medical Sciences consisting of members of the Faculties of Medicine and of Arts and Sciences, who are to recommend candidates for the degrees of A.M. and Ph.D. to the Faculty of Arts and Sciences. Work in Medical Sciences leading to these degrees may be carried on in several of the laboratories of the Medical School by properly qualified students. Information about these courses may be obtained from Professor WALTER B. CANNON, Chairman of the Division of Medical Sciences, Harvard Medical School.

FEES AND EXPENSES

Degree of Doctor of Medicine

The fees are:—For matriculation, *five dollars*; for instruction, *two hundred dollars* for each year (if in two payments, at the first, one hundred and twenty dollars; at the second, eighty dollars); for a half-year alone, *one hundred and twenty dollars*. During the first year there are the following additional expenses: three dollars for each of the three parts required for dissection; three dollars for laboratory materials in Histology; three dollars for Physiological material; and a maximum of ten dollars a year for Chemical material, in addition to the charge for breakage of glass apparatus. Students are required to deposit with the Bursar* nine dollars to cover Anatomy charges, three dollars for Histology, and twenty dollars for Chemistry and Physiology. The balances of these deposits are returnable at the end of the year. In the second year three dollars will be charged for the course in Surgical Technique; and a deposit of five dollars is required to cover breakage in

* The Bursar's office is in Dane Hall, Harvard Sq., Cambridge. Hours 9-1.

the laboratory course in the Theory and Practice of Physic, the balance of this deposit to be returnable at the end of the year. In the fourth year a charge of seven dollars is made for material used in the course in Operative Surgery. A deposit of one dollar with the Dean will entitle a student to the use of a locker in the School buildings. A student who wishes to rent a microscope of the School can do so upon payment of three to six dollars a half-year.

Payment of Fees

Each first-year student is required to pay to the Bursar punctually at the beginning of the academic year, without the presentation of a bill, the sum of *one hundred and fifty-seven dollars*; *each second-year student* is required to pay in the same manner *one hundred and twenty-eight dollars*; and *all other students* are required to pay, in the same manner, the sum of *one hundred and twenty dollars*. Fourth-year students electing Surgery are required to pay a charge of seven dollars for material in Operative Surgery. The remainder of the tuition fee — *eighty dollars* each for all students — must be paid to the Bursar on or before January 31. No degree can be conferred until all dues to the University have been discharged. Each student whose dues remain unpaid on the day fixed for their payment is required at once to cease attending lectures and using laboratories or making use of any other privileges as a student until his financial relations with the University have been arranged satisfactorily to the Bursar. Failure to comply with this rule is deemed cause for final separation from the University.

Degree of Doctor of Public Health

A fee of \$150 is charged for tuition, and \$5 for matriculation. Of this amount, \$95 must be paid to the Bursar at the beginning of the academic year without the presentation of a bill; the remaining \$60 must be paid on or before January 31. No degree can be conferred until all dues to the University have been discharged.

Degrees of Master of Arts and Doctor of Philosophy

For these degrees, a fee of \$150 is charged for tuition, and a graduation fee of \$20. Of this amount, \$90 must be paid to the Bursar at the beginning of the academic year without the presentation of a bill; the remaining \$60 must be paid on or before January 31st. The graduation fee of \$20 must be paid before Commencement. No degree can be conferred until all dues to the University have been discharged.

Stillman Infirmary Fee

Not later than October 10 in each academic year, any student may pay to the Bursar the sum of four dollars for the maintenance of the Stillman Infirmary; and, on the order of a physician, every student who has taken advantage of this opportunity will be given, in case of sickness, in return for the fee, a bed in a ward, board, and ordinary nursing for a period not exceeding two weeks in any one academic year.

Bond required of Students

Every student is required to file with the Bursar on his entrance to the School a bond of *fifty dollars*, executed by two sufficient bondsmen (one of whom must be a citizen of the United States), or to deposit fifty dollars in money, to cover the loss or injury of any property belonging to the University, or for which it is responsible. Blank forms of bonds may be obtained from the Secretary of the Faculty or from the Bursar. No officer or student of the University is accepted as a bondsman. Students will be held responsible for the payment of fees until they have notified the Dean, in writing, of their intention to withdraw from the School.

Withdrawal from the School

Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Administrative Board, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction. This remission will date from the reception by the Dean of a written notice of the student's withdrawal from the School. *No degree can be granted until the student has paid the full tuition fee for each year (first, second, third, fourth) in which he has been registered as a member of the School.*

If a student withdraws from the School for part of a year for good and sufficient reason as determined by the Faculty, he may leave his fees deposited with the Bursar to be used at some later date for instruction equivalent to that which he missed by his withdrawal. If a student shortens his four years' work by working in the Summer School of Medicine, he must still pay a full tuition fee for each year he is registered as a member of the School.

CLINICAL ADVANTAGES

The Medical Department of the University is established in Boston, in order to secure for Anatomy, Pathology, and the various clinical subjects, those advantages which are found only in large cities. The following clinics and hospitals of Boston are utilized extensively for clinical exercises for medical students, who are admitted freely to the Out-Patient departments, wards and operating rooms of these hospitals: —

The Collis P. Huntington Memorial Hospital. — This Hospital, which has been erected by the Cancer Commission of Harvard University on the Medical School grounds, will afford opportunity for the study of human tumor cases, with the advantage of a unification of clinical and laboratory facilities. The aim of the hospital is the study of special problems with the view of adding to the knowledge of the natural history and the rational treatment of tumors, and also to be of public service in affording means for early diagnosis and in carrying out treatment or giving advice regarding therapeutic measures. Accommodations are provided for from twenty to twenty-four in-patients; out-patients are also received at stated hours.

The Peter Bent Brigham Hospital. — Construction of this general hospital on ground adjacent to the Medical School buildings has begun, and its completion is expected in the autumn of 1912. Dr. HENRY A. CHRISTIAN, Hersey Professor of the Theory and Practice of Physic, and Dr. HARVEY CUSHING, Professor of Surgery, have been appointed by the trustees of the hospital Physician-in-chief and Surgeon-in-chief respectively.

The Massachusetts General Hospital. — During the past year, about six thousand five hundred patients were treated in the wards, six thousand cases were treated in the accident ward, and there were visits to the out-patient departments. Patients are received from all parts of the United States and the Provinces, and are visited by the students, with the attending physicians and surgeons, or demonstrated in the amphitheatres. Operations are numerous, and are performed in the surgical building. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, Children's Diseases, Orthopedics, and Diseases of the Genito-Urinary System. Two Dalton scholarships, of \$500 each, are open to the house pupils.

The Boston City Hospital. — During the past year, fifteen thousand, six hundred and thirty-one cases were treated in its wards, and there were over one hundred and eighty-four thousand visits in its various out-patient departments. The medical wards always contain many cases of

acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, six thousand street accidents are treated yearly. Surgical operations are performed in the amphitheatre. There are special services for diseases of women, of the eye, the ear, the skin, and the nose and throat. Diseases of women and of the nervous system are also largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons two or more times a week.

In these two hospitals, the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching over three thousand six hundred a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Boston Lying-in Hospital.—More than eight hundred patients were delivered during the last year in the Hospital. In the out-patient department, more than two thousand cases were attended by the hospital Externes, who are appointed from the third and fourth-year students. Clinical instruction is given in these cases by the physicians to out-patients and by the house physicians.

The Boston Dispensary.—About one hundred thousand visits were made by patients at this public charity during the past year. Students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of Medicine and Surgery. A well-equipped Hospital for Children, with a capacity of thirty beds (chiefly for medical cases), is attached to the Dispensary.

The Infants' Hospital.—The wards of the Hospital are devoted entirely to children under two years of age. During the past year about fifteen thousand visits were made by children of all ages to the out-patient department. The material of the Hospital is used throughout the year for teaching both students and graduates.

Children's Hospital.—During the past year more than seventeen hundred cases were treated in the wards and about twenty-nine thousand visits were made to the out-patient departments. Instruction in orthopedic surgery and in the general diseases of children is given by members of the hospital staff.

The McLean Hospital.—During the past year four hundred and sixteen patients, received from all parts of the country, were under treatment. Advanced methods of treatment are employed, including physical exercise, massage, hydrotherapy, etc., applied by persons expert

in these methods. In the laboratories, pathological, chemical, and psychological, work is carried on in immediate connection with the clinical studies and treatment of cases. There is a good special library of works in psychiatry and neurology, and a large list of American and foreign journals available for study. Clinical conferences are regularly held by the Medical Staff for the discussion of all cases admitted, including a study of the history, diagnosis, prognosis, and treatment of each case. These exercises and clinical demonstrations in the wards are available for a limited number of students.

The Boston State Hospital.—During the past year sixteen hundred and twenty-three patients were under treatment. Clinical instruction is given here in general clinics to medical students, and there are in addition facilities for the special study of cases by students taking elective courses. Besides regular commitments, emergency, voluntary and temporary care cases are received; the whole number of patients admitted last year was seven hundred and sixty-two, including many instructive examples of the various forms of mental disease.

The Massachusetts Charitable Eye and Ear Infirmary.—Over sixty-one thousand visits were made by patients at this institution during the past year. These cases present every variety of disease of the ear and eye, and supply a large number of operations. A new and enlarged hospital, considered to be one of the best of its kind in the world, has been erected on land adjoining the Massachusetts General Hospital. It is believed that this building will provide adequately for the proper treatment of the constantly increasing number of patients.

Long Island Hospital, Boston Harbor.—This Hospital is designed particularly for the treatment of chronic diseases. It has three hundred and twenty-five beds, with an average daily number of patients of about three hundred. In connection with it is a maternity department with an average of twenty-seven children and twenty-nine births. It has marked advantages for the study of syphilis, tuberculosis, diseases of the nervous system, and chronic diseases of the heart and of the kidneys. The number of autopsies is annually about 75 per cent of the deaths, a fact which affords an unusual opportunity for the study of pathological anatomy. The material in the Hospital is used for clinical instruction by the members of the Visiting Staff.

The Carney Hospital.—During the past year there were treated at this hospital three thousand seven hundred and one ward patients and in the out-patient department there were forty-five thousand visits by patients. The surgical, medical, gynaecological, and orthopedic services are under the direction of single heads with continuous service, who with assistants manage both the house and out-patient departments.

Clinical instruction will be given in connection with the various services, and opportunity will be afforded for a limited number of qualified men to engage in clinical investigation under the direction of the heads of services and their assistants. The orthopedic clinic offers special opportunities for the study of chronic joint affections in the adult.

The Free Hospital for Women. — This hospital is devoted exclusively to the surgical treatment of the diseases peculiar to women. The hospital has a capacity of sixty-seven beds. Operations are performed on Tuesdays, Wednesdays, and Thursdays throughout the morning. Physicians and medical students are invited to attend the operations and the medical ward visits with the Visiting Surgeon. Out-patient clinics are held every day in the week beginning at nine o'clock in the morning and at three o'clock in the afternoon. The clinics average from fifteen to thirty in attendance. Post-graduate courses in gynaecological examinations are given in these clinics. A well equipped laboratory is connected with the institution, where instruction in gynaecological pathology is given. A library containing the principal works on gynaecology is available for the use of students and visiting physicians.

HOSPITAL APPOINTMENTS

About eighty appointments as Internes and Assistants are made annually to hospitals in and about Boston for terms of service varying from six months to two years. These appointments are made after a competitive examination. In recent years almost every graduate of the Harvard Medical School desirous of hospital experience has obtained an appointment in some one of these hospitals.

WARREN ANATOMICAL MUSEUM

The Warren Anatomical Museum was founded in 1847 by JOHN COLLINS WARREN, of the College Class of 1797, Adjunct Professor of Anatomy and Surgery from 1809 to 1815, Hersey Professor of Anatomy and Surgery from 1815 to 1847, Professor *Emeritus* from 1847 to his death in 1856, son to JOHN WARREN, the first Hersey Professor of Anatomy and Surgery. This important Museum is open to students in the School, and its collections are used in demonstration of the lectures. It occupies the upper three floors of the Administration Building. Its Curator is Dr. WILLIAM FISKE WHITNEY.

The collection has about ten thousand specimens, illustrating both normal and pathological anatomy. Students may have access to these specimens at any time upon application to the Curator.

Besides dissections and serial sections of many bones, the anatomical collection includes many corrosion preparations, plaster and papier maché

models of bones, organs, and various parts of the body, and frozen sections.

The pathological collection is being constantly enlarged by the addition of numerous specimens, many of them preserved in their natural colors by Kaiserling's method.

LIBRARIES

Libraries in each of the four laboratory buildings contain the literature of the subjects taught in the building. These libraries are open to students daily and contain about 19,000 volumes, 29,000 pamphlets, and receive 255 different current periodicals. The students have a small general medical library of over 400 volumes and about 20 current periodicals for their own use in their reading room in the Administration Building.

The College Library at Cambridge is open to the students of this School.

The Boston Public Library is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Bursar's office, or deposited with the Bursar the sum of fifty dollars, may also use this library. The Bursar will furnish on application the necessary certificate of bond or deposit.

The Boston Medical Library, No. 8 The Fenway, contains about 73,000 bound volumes and 53,000 pamphlets, and nearly 650 current periodicals are on file. This very valuable Library is open to those who desire to consult medical literature, on week days from 9.30 A.M. to 10 P.M., on Saturdays till 6 P.M.

FELLOWSHIPS AND SCHOLARSHIPS

Fellowships

BULLARD FELLOWSHIPS. In 1891, WILLIAM STORY BULLARD, of Boston, gave the sum of fifteen thousand dollars for the establishment of three fellowships of five thousand dollars each "in memory of three physicians who were distinguished for their honorable personal character and for their professional services in this community." Accordingly the three following fellowships were established:—

THE GEORGE CHEYNE SHATTUCK MEMORIAL FELLOWSHIP.

THE JOHN WARE MEMORIAL FELLOWSHIP.

THE CHARLES ELIOT WARE MEMORIAL FELLOWSHIP.

The income of the first two is two hundred and twenty-five dollars each, and of the last, two hundred and fifty dollars.

The income from any one or all of these fellowships may be paid to any student or member of the medical profession who shall be selected by the Administrative Board of the Medical School to make such original

investigations in Medical Science as in their opinion will be most useful to the profession and to the community. The results of such investigations shall not, however, be published as a research performed under the grant of a Bullard Fellowship, unless the work shall have received the approval of the Committee. If published with the approval of the Committee, mention shall be made of the fact that the work was done under a Bullard Fellowship.

Holders of Bullard Fellowships are required to do an amount of work equivalent to not less than ten hours a week throughout the academic year and to present to the Committee at the end of the academic year a report on the amount and result of the work performed.

Applications for the Bullard Fellowships must be handed to the Dean on or before May 1.

CHARLES FOLLEN FOLSOM TEACHING FELLOWSHIP. In 1908 eleven thousand eight hundred and forty-three dollars and sixty-four cents was given by more than sixty persons in memory of Charles Follen Folsom, A.B. 1862, M.D. 1870, Lecturer on Hygiene, 1877-79, on Hygiene and Mental Diseases, 1879-80, on Mental Diseases, 1880-82; Assistant Professor of Mental Diseases, 1882-85, and Overseer, 1891-1903. It was the desire of the givers that there be established in the Medical School a Charles Follen Folsom Teaching Fellowship in Hygiene or in Mental and Nervous Diseases, and that the incumbent receive the annual income of the fund, or such part of it as may be consistent with the standing rules of the Corporation in such cases. This fellowship, with an income of five hundred and twenty-five dollars, has been assigned to the Department of Hygiene until the further order of the President and Fellows.

HENRY P. WALCOTT FELLOWSHIP IN CLINICAL MEDICINE; with a stipend of one thousand dollars. Founded in 1910 by FREDERICK CHEEVER SHATTUCK, A.M., M.D., LL.D. "The income to provide for the support of a Fellow in Clinical Medicine, who shall receive his appointment from the Corporation on nomination by the Jackson Professor of Clinical Medicine, who, while the holder of the Fellowship, shall not engage in private practice but devote his time to teaching and clinical research work."

AUSTIN FELLOWSHIPS. Six teaching fellowships, of five hundred dollars each, have been established from the income of the Austin Fund and assigned to the Medical School.

PROCTOR FUND. A bequest of fifty thousand dollars by Ellen Osborne Proctor for the purpose of promoting the study of chronic diseases. The income of this fund is to be devoted to the care in hospital of persons afflicted with chronic disease, and to investigations into the nature and treatment of the same. The special disposition of the income of this fund is under the control of the heads of the departments of Theory and Practice of Physic, Clinical Medicine, and Pathology.

Scholarships

The Cheever Scholarship is awarded to a student of the first-year class. The Hayden Scholarship may be so awarded. All the other Scholarships are awarded to members of the three upper classes.

EDWARD M. BARRINGER SCHOLARSHIPS. From the estate of Edward M. Barringer, of Schenectady, N. Y., thirty thousand two hundred and thirteen dollars and forty-nine cents has been received as his residuary bequest establishing the "Edward M. Barringer fund." "And I direct that the said 'President and Fellows' forever maintain from the income of said rest and residue (if the same shall be sufficient) two scholarships for students in said Medical School, the annual amount or value of such scholarships to be fixed from time to time by the said President and Fellows in their best discretion but at not less than \$300 and \$200 respectively; and with such conditions as to them shall seem best, to be called respectively 'Edward M. Barringer Scholarship No. 1,' and 'Edward M. Barringer Scholarship No. 2.'" These scholarships, with the incomes named above, are awarded to deserving students, preferably those of the fourth class.

LUCIUS F. BILLINGS SCHOLARSHIP, with an income of two hundred and twenty-five dollars, was founded in 1900 from a bequest under the will of Lucius F. Billings. The income may be divided between two or more students.

THE JAMES JACKSON CABOT SCHOLARSHIP; with an income of two hundred and seventy-five dollars. In 1906, Arthur T. Cabot, Samuel Cabot, and Guy C. Cabot gave six thousand dollars to establish the James Jackson Cabot Fund in the Medical School. The income remaining after adding a certain percentage to the principal each year is preferably, but not necessarily, to be used for a scholarship "to aid and encourage practical work in scientific medicine."

DAVID WILLIAMS CHEEVER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1889 by David Williams Cheever, M.D., LL.D., of Boston, of the Class of 1852. It is to be awarded to a poor and meritorious student of the first year, after three months' probation in the Medical School.

ORLANDO W. DOE SCHOLARSHIP. The bequest of ORLANDO WITHERSPOON DOE (A.B. 1865, M.D. 1869) was five thousand dollars. One-half of the income derived therefrom, amounting to one hundred dollars, "is to be given annually as a scholarship to a deserving student in the Medical department."

JOSEPH EVELETH SCHOLARSHIPS. Three Scholarships with an annual income of two hundred dollars each. Founded from the residuary bequest of thirty-seven thousand eight hundred and ninety-seven dollars and fourteen cents, made by Joseph Eveleth, of Boston, "for aiding deserving and indigent young men in obtaining an education in said College or any of the schools connected therewith." Three Scholarships on this foundation have been assigned to the Harvard Medical School.

The **LEWIS AND HARRIET HAYDEN SCHOLARSHIP** for colored students was founded in 1894 from a bequest of Mrs. Harriet Hayden. The income, two hundred and fifty dollars, may be divided between two or more students.

HILTON SCHOLARSHIPS. Two Scholarships, with an income of two hundred and twenty-five dollars each, were founded in 1897 from a bequest of William Hilton.

CLAUDIUS M. JONES SCHOLARSHIP, with an income of two hundred and fifty dollars, is from a bequest of six thousand dollars by Claudius Marcellus Jones, of the Class of 1866, M.D. 1875.

ALFRED HOSMER LINDER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1895 by Mrs. George Linder. It is to be awarded to a needy student who shall have proven himself to be of sound principles and marked ability.

The **JOSEPH PEARSON OLIVER SCHOLARSHIP**, with an income of four hundred dollars, was founded in 1904 by patients of the late Joseph Pearson Oliver, M.D. 1871, to be awarded "to such needy and deserving student of the Medical School as the Administrative Board shall annually recommend."

CHARLES B. PORTER SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1897 from a bequest of five thousand dollars by William L. Chase.

CHARLES PRATT STRONG SCHOLARSHIP, with an income of two hundred and twenty-five dollars, was founded in 1894 by friends and patients of the late Charles Pratt Strong, of the Class of 1876, M.D. 1881.

ISAAC SWEETSER SCHOLARSHIP, with an income of two hundred and fifty dollars at present, was founded in 1892 by Mrs. Anne M. Sweetser. The income is to be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

The **JOHN THOMSON TAYLOR SCHOLARSHIP**, with an income of two hundred and fifty dollars, was founded in 1899 by Mrs. Frederic D. Philips in memory of her brother, John Thomson Taylor, who died in 1889. He was a student of the Medical School from 1887 to 1889.

EDWARD WIGGLESWORTH SCHOLARSHIP, with an income of two hundred and fifty dollars, was founded in 1897 by the family of the late Edward Wigglesworth, of the Class of 1861, M.D. 1865, the yearly income of the fund to be paid to a needy and deserving student of the Medical School whom the Administrative Board shall recommend.

FRANCIS SKINNER FUND. A fund of five thousand dollars was established in 1905, the income of which shall be placed at the disposal of the Dean of the Medical School to be used by him in small sums to meet the urgent needs of meritorious students in the payment of term-bills or other expenses. Two hundred dollars is available annually.

This fund remained as an anonymous gift until 1908, when by vote of the President and Fellows of Harvard College it was named the Francis Skinner Fund in honor of the late Francis Skinner, Esq., the donor.

COTTING GIFT. The income of a fund received from the late Dr. Benjamin E. Cotting will be given to such medical student or students as the Administrative Board may select, having regard to the pecuniary needs, intellectual capacity, faithfulness and earnest endeavor, rather than to highest scholarship merely. The amount to be awarded annually will be one hundred and twenty-five dollars.

JOHN FOSTER FUND. The income of the John Foster Fund, amounting to about one hundred and fifty dollars, is available in alternate years in the Law School and in the Medical School, for one or more meritorious students needing assistance. The next assignment in the Medical School will be made in 1914.

JAMES EWING MEARS SCHOLARSHIP IN MEDICINE. Dr. J. EWING MEARS has entered into an agreement with the President and Fellows whereby he has provided for the payment of \$225 a year during his lifetime for the maintenance of a scholarship in the Medical School; and the permanence of this scholarship has been secured by a bequest of \$5000. The scholarship is to be awarded to a young man whose financial resources are such that he cannot, unaided, acquire a medical education, and whose scholarship is good. This scholarship is to be held for the full course of four years in the Medical School, subject to the standing the recipient shall maintain in scholarship and to his good conduct as a student of the School.

THE LOAN FUND OF THE MEDICAL CLASS OF 1879. The Medical Class of 1879 has given the sum of \$436.79 to be used as a loan fund to aid any student or students in the Medical School in accordance with the request of the Class, or, in the absence of such request, under the direction of the Faculty of Medicine.

Fellowships and Scholarships available in other Departments of the University as well as in the Medical School

THE FREDERICK SHELDON FUND FOR TRAVELLING FELLOWSHIPS AND SCHOLARSHIPS. *The income of this Fund is available for holders of any degree from Harvard University. For further particulars, see University Catalogue for 1911-12, page 588.*

THE W. GRAHAM BOWDOIN, JR., SCHOLARSHIP; with an income of two hundred and fifty dollars, "to be awarded each year to a deserving student from the State of Maryland, who may be registered in any department of the University." For further particulars, see University Catalogue for 1911-12, page 551.

THE CHARLES ELLIOTT PERKINS SCHOLARSHIP; with an income of three hundred dollars, "to be offered each year to a graduate of an Iowa College or University, in any of the graduate or professional departments of Harvard University." The terms of gift are quoted further in the University Catalogue for 1911-12, page 560.

THE JAMES A. RUMRILL SCHOLARSHIP; with an income at present of two hundred and twenty-five dollars. This Scholarship, founded in 1909 by Mrs. JAMES A. RUMRILL, in memory of her husband, JAMES AUGUSTUS RUMRILL, of Springfield, Mass., of the Class of 1859, will be offered each year to a properly qualified graduate of a college or university in Virginia, North Carolina, South Carolina, Florida, Georgia, Tennessee or Kentucky. The terms of gift are quoted further on page 606 of the University Catalogue for 1911-12.

THE PRINCETON FELLOWSHIP; with a stipend of four hundred and fifty dollars. From a graduate of Princeton University, to be awarded to a graduate of that University studying in any department of Harvard University.

These scholarships and gratuities are awarded to such men among those applying for and needing assistance as give evidence of having done the best work either in this School or in a preparatory course elsewhere.

Students who have not been able to obtain scholarships often find time and opportunity to do outside work of various kinds in the city.

Information with regard to all forms of pecuniary aid may be obtained from the Director of Scholarships. The Director will aid deserving students in obtaining work. Certain loan funds not enumerated above are at his disposal. Students requiring aid should visit the Director as soon as possible to discuss with him their financial needs. The Director will also act in advisory capacity with the students in any matters not intimately associated with the curriculum.

Third-year students may apply for scholarships in January; second-year students, in February; first-year students, in March. All applications must be made before *May 1*.

Applications for the Cheever and Hayden Scholarships must be handed to the Director of Scholarships on or before *November 30*. These scholarships are open only to students who are members of the School at the time of application.

Blank forms, on which all applications for pecuniary aid must be made, may be obtained of the Director of Scholarships.

BOYLSTON MEDICAL PRIZES

These prizes, which are *open to public competition*, are offered annually for the best dissertations on questions in medical science proposed by the Boylston Medical Committee. In future, however, the prizes will be awarded at longer intervals, and will include the offer of a medal as well as a pecuniary reward.

At the annual meeting held in Boston in 1912 a prize was awarded to ARTHUR BREWSTER EMMONS, 2d, M.D., for a dissertation entitled: *A Study of the Variations in Woman's Pelvis, based on observations made on two hundred and seventeen specimens of the American Indian squaw.*

For 1913 two prizes are offered:—

1. A prize of seventy-five dollars for the best dissertation on *The results of Original Work in Anatomy, Physiology, or Physiological Chemistry*. The subject to be chosen by the writer.

2. A prize of seventy-five dollars for the best dissertation on *The results of Original Investigations in Pathology, Bacteriology, Therapeutics, or Pharmacology*. The subject to be chosen by the writer.

Dissertations on these subjects must be sent post-paid to H. C. ERNST, M.D., Harvard Medical School, Boston, Mass., on or before *January 1, 1913*.

The next prize that will be offered will be under date of 1915, and will include a larger pecuniary reward, as well as a Boylston Medal. Details in regard to this prize will be announced later.

In awarding these prizes preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear in place of its author's name some sentence or device, and must be accompanied by a sealed packet bearing the same

sentence or device, and containing within the author's name and address. *Any clew by which the authorship of the dissertation is made known to the Committee will debar such dissertation from competition.*

Dissertations must be printed or typewritten, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within *one year* after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes:—

1. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.

2. That in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows, and consists of the following physicians: WILLIAM F. WHITNEY, M.D., *Chairman*; HAROLD C. ERNST, M.D., *Secretary*; FRANZ PFAFF, M.D., THEOBALD SMITH, M.D., WILLIAM T. PORTER, M.D., EDWARD H. NICHOLS, M.D., JOHN WARREN, M.D.

The address of the *Secretary* of the Boylston Medical Committee is HAROLD C. ERNST, M.D., Harvard Medical School, Boston, Mass.

William H. Thorndike Prize.—A prize of two hundred dollars will be given annually to the author of the best essay on some subject in any branch of Surgery.

The students of the Harvard Medical School and graduates of under five years' standing of any recognized medical school are eligible in competition for this prize.

Each essay must bear in place of its author's name some sentence or device, and must be accompanied by a sealed packet bearing the same sentence or device, and containing within the author's name and residence. If the author is a graduate, it must also contain the date of his graduation in medicine and the medical school from which he was graduated. Any clew by which the authorship of an essay is made known to the judges will debar such essay from the competition.

The essays must be sent to the Dean of the Harvard Medical School, Longwood Avenue, Boston, Mass., U. S. America, on or before November 1 of each year, and the award will be made annually on December 24. If no essay is considered worthy of a prize, no award will be made.

Otological Prize.—For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, a prize of twenty-five dollars is offered, open to fourth-year students.

Other Prizes.—The Bowdoin, Dante, Sumner and Toppan Prizes, offered by the Faculty of Arts and Sciences, are open to students in all departments of the University. Full particulars in regard to these prizes may be found in the University Catalogue for 1911-12, pages 535-541, and 585-587.

COURSES FOR SPECIAL STUDENTS

All courses, including laboratory courses, in the Harvard Medical School are open to persons not candidates for the degree of Doctor of Medicine; that is to say, to special students and to students in other Departments of the University. In order to be admitted to a course, the applicant must satisfy the head of the Department concerned of his fitness to pursue the work. Hitherto such students have been registered as members of the Harvard Medical School; but, with the establishment of the Graduate School of Medicine, October 1, 1912, these special students will be enrolled in the membership of that School, if they are not eligible for the degree of Doctor of Medicine.

COURSES FOR GRADUATES

Beginning October 1, 1912, graduate instruction in medicine will be organized as a Department of the Faculty of Medicine of Harvard University, with a separate Dean and Administrative Board.

The object is, by better organization and the development of teaching facilities, — both clinical and laboratory, — to offer graduates in medicine opportunities to continue their studies in as thorough and scientific a manner as in the Medical School proper.

Adequate opportunities for study will be offered for those graduates who wish to review past studies and for those who wish to keep abreast of recent advances in medicine. Other courses will be offered for those who are interested in special subjects, and the excellent opportunities for advanced study and for research in all departments of medical science will be made available for those who are qualified by previous training to undertake such work. Thus graduates in medicine, both of remote and of recent date, whether desiring fundamental reviews or in quest of the attainment of higher standards, are provided for. Graduates of recognized medical schools will be accepted as students.

While all courses are intended primarily for those who hold degrees from recognized medical schools, certain courses in the scientific subjects are adapted to the needs of advanced students and teachers of science. Such persons may be admitted to courses on the approval of the Administrative Board.

Undergraduate students of medicine may be admitted by vote of the Administrative Board to such courses as they are qualified to take. Special consideration for the needs of such students will be given in the plans for summer courses.

The laboratory facilities in the buildings of the Harvard Medical School and at some of the hospitals are available for graduate instruction, as are also abundant clinical opportunities of all kinds in the following institutions :—

Massachusetts General Hospital,	Free Hospital for Women,
Boston City Hospital,	Children's Hospital,
Peter Bent Brigham Hospital,	Infants' Hospital,
Carney Hospital,	Massachusetts Babies' Hospital,
Boston Dispensary,	McLean Hospital.
Massachusetts Eye and Ear Infirmary,	Boston State Hospital,
Boston Lying-in Hospital,	Danvers State Hospital.

Clinical and laboratory instruction will be conducted in small classes so that students may receive personal attention.

The fees for separate courses vary from \$5 to \$125, according to the nature of the instruction and the duration of the course. An extra fee is required for the use of material in laboratory, dissecting, and operative courses.

Graduates seeking admission to any of the graduate courses must first register their names at the office of the Dean of the Graduate School of Medicine, where all fees are payable, and obtain a receipt to be shown at the first exercise.

For further information and full description of the courses and lectures for graduates, address the Dean of the Graduate School of Medicine, Harvard Medical School, Longwood Avenue, Boston, Mass.

TABULAR VIEW OF UNDERGRADUATE COURSES

FIRST YEAR — First Half-Year

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-10	<i>October.</i> Anatomy. Lecture. <i>November, December.</i> Demonstrations and Laboratory Work.	<i>Oct., Nov., Dec.,</i> Anatomy. Lecture.	<i>October.</i> Anatomy. Lecture. <i>November, December.</i> Demonstrations and Laboratory Work.			<i>Oct., Nov., Dec.,</i> <i>9-11.</i> Histology. — <i>January, 9-11.</i> Anatomy. Lecture.
10-1		<i>October, November, December, January.</i> Demonstrations and Laboratory Work.				<i>Oct., Nov., Dec.,</i> <i>January, 11-1.</i> Anatomy. Lecture and Demonstrations
2-6		<i>January.</i> Anatomy. Lectures, Demonstrations, and Laboratory Work.				
2-2.30		<i>October, November, December.</i> Histology. Lecture.				
2.30-6		Histology. Laboratory.				<i>Oct., Nov., Dec., Jan.</i> General Chemistry.

FIRST YEAR. — Second Half-Year
PHYSIOLOGY. FEBRUARY

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
9-10				Lecture or Demonstration.		
10-1				Laboratory Experiments.		
				<i>March, April, May.</i>		
9-10				Lecture or Demonstration.		
10-12.15				Laboratory Experiments.		
12.15 1				Thesis or Lecture or Laboratory Experiments.		
				BIOLOGICAL CHEMISTRY.		
2-3				Lecture. Daily except Saturday.		
3-5.30		Laboratory.		Laboratory and Conference.	Laboratory.	

SECOND YEAR. — First Half-Year.

	OCTOBER.	NOVEMBER.	DECEMBER.		JANUARY.
9-12	Pathology. Laboratory.	1 week. Pathology. Laboratory. Daily.	2 and 3 weeks. Pathology of certain Parasitic Diseases. Laboratory. T. Smith and E. E. Tyzzer. Daily.	9-10	Monday, Wednesday, and Friday. Surgery. Clinical Lecture. Nichols. B. C. H.
				9-12	Tuesday, Thursday, and Saturday.
				10.30-12	Monday, Wednesday, and Friday. Pathology. Laboratory.
12-1	Pathology. Lectures. Daily.			12-1	Pathology. Lectures. Daily.
2-3	Bacteriology. Lectures. Daily except Saturday.		Neuropathology. Daily except Saturday. Lectures and Laboratory. Southard.		Surgical Pathology. Laboratory. Daily except Saturday. Nichols.
3-5.30	Bacteriology. Laboratory. Daily except Saturday.				

SECOND YEAR. — Second Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
	M. G. H.	M. G. H.	B. C. H.	M. G. H.	M. G. H.	B. C. H.
9-10	Clinical Medicine Clinic Edsall	Surgery Clinic Porter	Surgery Clinic Blake	Theory & Practice Clinic Badger	Surgery Clinic Greenough	Clinical Medicine Clinic Sears
10-11						Surgery Clinic Lothrop
11-12	Section Work					
1-3	Clinical Pathology. Bldg. D.					
3-4	Preventive Medicine and Hygiene. L. Rosenau Bldg. E.	Theory & Practice. L. Christian Room 201 Bldg. A.	Preventive Medicine and Hygiene. L. Rosenau Bldg. E.	Preventive Medicine and Hygiene. L. Rosenau Bldg. E.	Theory & Practice. L. Christian Room 201 Bldg. A.	
4-5	Surgery. L. Room 201 Bldg. A.	Material Medica and Pharmacology L. & R. Bldg. E.	Pharmacology. L. Pfaff Bldg. E.	Surgery. L. Room 201 Bldg. A.	Pharmacology. L. Pfaff Bldg. E.	
5-6	Surgical Technique 6 lectures Lothrop Room 201 Bldg. A.	Surgery. L. Room 201 Bldg. A.			Surgery. R. Lothrop and Greenough Room 201 Bldg. A.	

THIRD YEAR. — First Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
<i>Class Exercises</i> 9-10	Theory and Practice Clinic Hewes, M. G. H.	Clinical Medicine Clinic Sears, B. C. H.	Clinical Medicine Clinic Smith, M. G. H.	Theory and Practice Clinic. Stone, Dec, or Lord, M. G. H.	Clinical Medicine Clinic Sears, B. C. H.	Clinical Medicine Clinic Edsall, M. G. H.
10-11	Surgery Clinic Porter M. G. H.	Clinical Surgery Clinical L. Nichols, J. B. Blake B. C. H.	Dermatology Clinic Bowen, M. G. H.	Neurology Clinic Taylor, M. G. H.	Pediatrics Clinical L. Roteh, C. H.	Theory and Practice Clinic Pratt, M. G. H.
<i>Sections</i> 11-1	Section Work.					
2-3		Dermatology. L. White, Room 201 Bldg. A. <i>Dec. 17, Jan. 28</i>				
3-4	Obstetrics. L. Green Room 205 Bldg. A.	Theory & Practice. L. Christian, Room 201 Bldg. A.	Obstetrics Conference Swain Room 205 Bldg. A.	Obstetrics. L. Green Room 205 Bldg. A.	Theory & Practice. L. Christian, Room 201 Bldg. A.	
4-5	Surgery. L. Room 201 Bldg. A.	Dermatology. L. White, Room 201 Bldg. A. <i>Sept. 24, Oct. 29, Nov. 26 Dec., Jan.</i> Syphilis. L. Post, Room 205, Bldg. A.	Surgery. L. Room 201 Bldg. A.	Pediatrics. L. Roteh Room 201 Bldg. A.	Obstetrics. R. Newell Room 205 Bldg. A.	
5-6	<i>Oct., Nov.</i> Ophthalmology Standish Room 205, Bldg. A. <i>Dec., Jan.</i> Orthopedics Lovett Room 201 Bldg. A.	Surgery. R. Lothrop and Greenough Room 201, Bldg. A.	<i>Oct., Nov.</i> Ophthalmology Standish Room 205, Bldg. A. <i>Dec., Jan.</i> Orthopedics Lovett Room 201 Bldg. A.	<i>Oct., Nov.</i> Surgery. L. Room 205, Bldg. A. <i>Dec., Jan.</i> Orthopedics Lovett, Room 201 Bldg. A.	Therapeutics. L. Pfaff Bldg. E.	

THIRD YEAR. — Second Half-Year.

	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
<i>Class Exercises</i> 9-10	Theory and Practice Clinic Pratt, M. G. H.	Clinical Medicine Clinic Robey, White, or Locke, B. C. H.	Neurology Clinic Putnam, M. G. H.	Clinical Medicine Clinic Sears, B. C. H.	Clinical Medicine Clinic Robey, White, or Locke, B. C. H.	Clinical Medicine Clinic Shattuck, M. G. H.
10-11	Clinical Surgery. C. A. Porter M. G. H.	Clinical Surgery Nichols, J. B. Blake B. C. H.	Dermatology Clinic Bowen, M. G. H.	G. U. Surgery Clinical L. P. Thorndike. B. C. H.	<i>Feb., Mar.</i> Pediatrics Clinical L. Morse Infants' Hospital <i>Apr., May</i> Syphilis Clinical L. Post, B. D.	Neurology Clinic Taylor, M. G. H.
<i>Sections</i> 11-1	Section Work.					
2-3		Dermatology. L. White, Room 201, Bldg. A. <i>Feb. 25, Mch. 25</i> <i>April 29, May 27</i>			Psychiatry Cowles Room 201, Bldg. A.	
3-4	Obstetrics, L. Green Room 205 Bldg. A.	Surgery Case Teaching J. B. Blake Room 205, Bldg. A.	Obstetrics Conference Swain, Room 205 Bldg. A.	Obstetrics, L. Green Room 205 Bldg. A.	Obstetrics, R. Newell Room 205 Bldg. A.	Psychiatry Clinic Cowles, B. S. H.
4-5	Pediatrics, L. & R. Morse Room 205 Bldg. A.	Pediatrics, L. Roch Room 201 Bldg. A.	Gynecology L. or R. Green, Room 205 Bldg. A.	Laryngology Lecture Coolidge, Room 205 Bldg. A.	Gynecology, L. or R. Green Room 205 Bldg. A.	
5-6	Clinical Medicine Case Teaching Cabot Room 205 Bldg. A.	<i>Feb., Mar.</i> Orology Lecture C. J. Blake, Room 205 Bldg. A. <i>Apr., May</i> Laryngology Lecture Coolidge Room 205, Bldg. A.	Clinical Medicine Case Teaching Cabot Room 205 Bldg. A.	Orology Lecture C. J. Blake, Room 205 Bldg. A.		

DEGREES

ON FEBRUARY 28, 1912, DEGREES WERE CONFERRED AS FOLLOWS: —

M.D.

John Woodward Abbott, A.B. (*Bates Coll.*) 1905.

Charles Franklin Kingsbury Bean, A.B. (*Tufts Coll.*) 1907.

Francis Joseph Doherty.

Harry William Haight, A.B. (*Princeton Univ.*) 1907.

Robert Bates Hunt, A.B. (*Clark Univ.*) 1907.

Thomas Joseph McLaughlin, A.B. (*Mt. St. Mary's Coll.*) 1902, A.M. (*ibid.*) 1904.

Jean Sears Millard, S.B. 1901.

M.D. cum Laude

Edward Levis Prizer, A.B. 1908 (1907).

M.D. Out of Course

Amos Thomson Harrington, A.B. (*Yale Univ.*) 1894, S.T.B. (*ibid.*) 1897, as of the class of 1910.

ON COMMENCEMENT DAY, JUNE 20, 1912, DEGREES WERE CONFERRED AS FOLLOWS: —

Dr.P.H.

Harold Lindsay Amoss, S.B. (*State Univ. of Kentucky*) 1905, S.M. (*ibid.*) 1907, M.D. (*Harvard Univ.*) 1911.

William Gilbert Anderson, M.D. (*Western Reserve Univ.*) 1883, A.B. (*Yale Univ.*) 1902, A.M. (*ibid.*) 1903, S.M. (*ibid.*) 1909.

Edwin Henry Schorer, S.B. (*Univ. of Missouri*) 1902, M.D. (*Johns Hopkins Univ.*) 1906.

M.D.

Samuel Mitchell Alter, A.B. 1909 (1908).

Daniel Clarke Brennan, A.B. 1907.

Eliot Sanborn Cogswell, A.B. (*Dartmouth Coll.*) 1906.

Anthony Bernard Diepenbrock, A.B. (*Santa Clara Coll.*) 1908.

Joseph Aloysius Donovan, A.B. (*Bates Coll.*) 1908.

Malcolm Robertson Elliott, A.B. (*Acadia Univ.*) 1908.

Earle Edwin Farnsworth, A.B. (*Cornell Univ.*) 1903.

Edgar Sidney Fortner, A.B. (*Missouri State Univ.*) 1910.

Thomas Francis Grady, A.B. (*Holy Cross Coll.*) 1908.

Ernest Henry Gruening, A.B. 1907.

John Wilkes Hammond, Jr., A.B. (*Dartmouth Coll.*) 1907

Herbert Elisha Harris, A.B. (*Brown Univ.*) 1907.

- Norman Paul Hersam, S.B. (*Univ. of California*) 1908.
 Herbert Handy Howard, S.B. (*Tufts Coll.*) 1909.
 Ira Butler Hull, A.B. (*Bates Coll.*) 1908.
 Don Jerome Knowlton, A.B. 1908.
 Frank Charles William Konrad, S.B. (*Univ. of Wisconsin*) 1910.
 Alfred Edward Meyers, A.B. (*Leland Stanford Jr. Univ.*) 1907.
 Alvah Strong Miller, A.B. (*Univ. of Rochester*) 1907.
 William Michael O'Shea, A.B. (*Gonzaga Coll.*) 1907.
 Raymond Brewer Parker, S.B. (*Dartmouth Coll.*) 1908.
 Isidor Perlstein.
 Donald Wallace Porter, A.B. (*Yale Univ.*) 1908.
 Wayne Stevenson Ramsey, A.B. (*Washington and Jefferson Coll.*) 1908.
 André William Reggio, A.B. 1908.
 Clarence Hudson Richardson, A.B. (*Lincoln Univ.*) 1901.
 Clifford George Rounsefell, A.B. 1907.
 Clyde Hadrian Tearnan, S.B. (*Univ. of Wisconsin*) 1910.
 Raymond Arthur Tearnan, S.B. (*Univ. of Wisconsin*) 1910.
 Charles Francis Thomas, Jr., A.B. (*Bowdoin Coll.*) 1907.
 Howard Arthur Tribou, S.B. (*Colby Coll.*) 1908.
 MacIver Woody, A.B. (*Richmond Coll.*) 1905, A.B. (*Harvard Univ.*) 1907.

M.D. cum Laude

- Donald Vinton Baker, A.B. 1908.
 Lyman Guy Barton, Jr., A.B. (*Princeton Univ.*) 1908.
 Louis Hopewell Bauer, A.B. 1909.
 William Wallace Behlow, A.B. (*Leland Stanford Jr. Univ.*) 1907.
 Whitman King Coffin, A.B. 1909.
 Frederick Amasa Collier, S.M. (*So. Dakota State Coll.*) 1908.
 Lewis Wendell Hackett, A.B. 1905.
 William Augustus Hinton, S.B. 1905.
 Walter Maurice Lacey, A.B. (*Williams Coll.*) 1908.
 Percy Jonathan Look, A.B. (*Boston Univ.*) 1908.
 Henry Lyman, A.B. 1901.
 George Richards Minot, A.B. 1908.
 Joseph Leroy Murphy, A.B. 1909.
 Ezekiel Pratt, A.B. 1909.
 Francis Minot Rackemann, A.B. 1909.
 Eugene Watson Rockey.
 Orville Forrest Rogers, Jr., A.B. 1908.
 Wilson George Smillie, A.B. (*Colorado Coll.*) 1908.
 John Edward Talbot, A.B. 1902, LL.B. 1905.
 Philip Duncan Wilson, A.B. 1909.

ADMISSION EXAMINATION

1912

CHEMISTRY

INORGANIC CHEMISTRY

1. Describe the following substances: Hydrochloric acid, potassium permanganate, iodine, nitrous acid.
2. How much carbonic acid can be prepared from 100 grams of sodic bi-carbonate ?
3. How would you dissolve sodium, zinc, tin, lead, platinum ?
4. What happens when nitric acid is added to a sodium chloride solution ?
5. Give the names and formulas of five different metallic oxides.

ORGANIC CHEMISTRY

1. Write the formulas of glycerin, lactic acid, picric acid, phenol, acetaldehyde.
2. Give the names, structural formulas and properties of H_2CO_2 and $\text{H}_2\text{C}_2\text{O}_4$.
3. Discuss isomerism and give five illustrations.
4. Describe acetone, aniline chloroform, benzaldehyde.
5. Describe three experiments which you did in organic chemistry.

EXAMINATION PAPERS

(*Annual Examinations, 1912*)

First-Year Studies

ANATOMY — Asst. Professor WARREN

1. Describe the atlas and axis and the joints between them and the occipital bone.
2. Describe the middle ear.
3. Describe the valves of the heart.
4. Describe the lesser peritoneal cavity and its communication with the general abdominal cavity.
5. Describe the muscles of the perineum.
6. Describe the origin, course, and distribution of the ulnar nerve.

HISTOLOGY AND EMBRYOLOGY — Professor MINOT

[*Each student is given four sections to correspond with the first four questions given below. He is expected to make simple drawings only, but sufficient to show that he has correctly identified the parts. Any student who draws tissues or structures, not shown in his preparations, will be considered to have failed in all his answers.*]

1. What is the organ? Draw the different kinds of epithelium in the section. What evidences of cell activity are shown?
2. What is the specimen? Describe the development of the chief components. What is the stain?
3. Describe the specimen.
4. Describe the specimen.
5. Describe briefly the origin of the (a) kidney, (b) retina, (c) seminiferous tubules, (d) pancreas, (e) semicircular ducts (canals).

PHYSIOLOGY — Professor CANNON

Answer any five questions. Mention, where possible, experimental evidence in support of your statements.

1. Discuss the distribution of smooth and striated muscle in the body, the innervation of the two types of muscle, and their physiological peculiarities.
2. Discuss the methods, nervous and circulatory, by which bodily activities are coördinated.

3. What is the function of arterial blood pressure? Consider in detail the factors affecting it.
4. Discuss the coagulation of the blood. What conditions favor, what retard, coagulation?
5. Define and illustrate the meaning of psychic secretion, and describe its rôle in digestion.
6. What is the value of a uniform body temperature? Under what conditions may the temperature vary in mammals?

BIOLOGICAL CHEMISTRY — Professor FOLIN

1. Discuss the origin and significance of the "acetone bodies" in urine.
2. Discuss the "respiratory quotient" and its relation to the kind of food consumed.
3. Describe in full the colorimetric method for the determination of the total nitrogen in urine.
4. Write the graphic formulae of uric acid, creatine, palmitic acid, phenylalanin and cystin.
5. Write out a 24-hour diet list representing about 3000 calories and 12 grams of nitrogen.
6. Name and characterize three disaccharides.
7. Write the formulae and give the names of two dipeptides.
8. Describe the determination in urine of (a) sugar, (b) total sulphur.
9. Discuss the phenomenon of nitrogen equilibrium.
10. Discuss the function of haemoglobin.

Second-Year Studies

BACTERIOLOGY — Professor ERNST

1. How would you differentiate *B. typhosus* from *B. coli communis*?
2. What is Tuberculin?
3. Describe the methods of cultural diagnosis of Diphtheria.
4. What does an antitoxin do upon injection?

PATHOLOGY — Professor COUNCILMAN

EXAMINATION IN PATHOLOGY

1. Name a number of pathological conditions in which giant cells may be found.
2. Discuss fatty degeneration. What is meant by this? What may be said regarding the source of the fat found in this?
3. What organs of the rabbit are most likely to be affected by the intravenous injection of *staphylococcus aureus*? Describe the development of a typical lesion so produced.

4. What is haemolysis? Its relation to haemoglobinuria? How may the latter be produced experimentally?

5. What are the chief characteristics of a so-called benign as distinguished from a malignant tumor?

6. Describe the lesions which would be found in the heart, lungs, liver and kidneys in an autopsy on a chronic case of mitral endocarditis resulting in stenosis and insufficiency of the mitral valve.

EXAMINATION IN PARASITOLOGY

(Write in separate book.)

7. Describe the life cycle of *Trichinella spiralis*, of *Uncinaria (Ankylostoma duodenale)*, or *Necator americanus*, and give in detail the modes of transmission.

8. Give the complete development of:—(a) *Eimeria stiedae*, the coccidium of the rabbit; (b) *Plasmodium vivax*, the organism of tertian malaria.

EXAMINATION IN NEUROPATHOLOGY

(Write in separate book.)

9. What is the course of impulses from the periphery to the cerebellar cortex? Mention diseases interfering with the neurones in question.

10. What is the effect in the periphery of destroying corticospinal neurons (pyramidal tract)? How many types of neurone might be affected in poliomyelitis of lumbar and low thoracic extent?

PREVENTIVE MEDICINE AND HYGIENE — PROFESSOR ROSENAU

1. Discuss pasteurization. State objects; temperature and time; advantages and disadvantages; methods etc.

2. Given a hospital with one general ward and one isolation ward; and cases of typhoid fever and tuberculosis to care for. Which one of these would you isolate? Why? How would you prevent the spread of the infection of the other disease to the patients in the general ward?

3. Discuss the filtration of public water supplies. Contrast slow sand filtration with mechanical filtration.

4. What is meant by the following: Contacts; an infectious disease; a contagious disease; modes of transmission; channels of infection; missed cases?

What are the usual modes of transmission of measles, scarlet fever, common colds, hookworm disease, plague, typhus fever?

Third-Year Studies**MATERIA MEDICA AND THERAPEUTICS — Professor PFAFF**

1. Action and uses of adrenalin.
2. Action and uses of arsenic. Mention newer preparations and state the dangers incident to their use.
3. Compare the action of simple and drastic purgatives, and mention the important members of the different groups of drugs used for this purpose.
4. Compare the action of atropine and physostigmine.
5. Desiring to increase the flow of urine in a given case, what substances would you use, and state pharmacological reasons for their employment.
6. Give in detail the treatment of hyperacidity of the stomach, also of anacidity.
7. Give general methods of treatment in cases of acute and of chronic poisoning.
8. General treatment of diabetes mellitus.
9. Write prescriptions for the following drugs, avoiding abbreviations and giving full directions to the patient: —
 - (a) Nitroglycerine
 - (b) Apomorphine
 - (c) Chloral
 - (d) Caffein
 - (e) Codein
 - (f) Atropin

THEORY AND PRACTICE OF PHYSIC — Professor CHRISTIAN

1. Discuss chronic poisoning with (a) lead, (b) arsenic. Give differential diagnosis points between the two.
- 2 and 3. Give the results of the physical examination of a patient with chronic myocarditis (myocardial insufficiency) in the stage of broken compensation. Describe in detail your treatment of this case during the twenty-four hours following your physical examination, basing all your procedures on the described physical findings. Describe your treatment in detail during the twenty-four hour period beginning four days later, basing all of your procedures on the results obtained by the treatment previously given. Similarly describe your treatment of the case at a period three weeks later. (Write out a prescription for all drugs advised.)
4. Describe the symptomatology and physical findings in incipient pulmonary tuberculosis.
5. Discuss the symptomatology, diagnosis and treatment of gastric and duodenal ulcer.

CLINICAL MEDICINE—Professor SHATTUCK

Discuss these cases in the order in which they are arranged. Assume that symptoms not mentioned are wanting; but as omissions, intentional or not, may occur, state them if essential. The intelligent discussion of the case will have more weight than a hasty and inconclusive though correct diagnosis. Write out all prescriptions in full.

CASE 1.

A grandmother of 57 was seen December 12, 1910. She has done hard muscular work all her life, but has had no illness and passed the menopause without disturbance five years ago. The hands have felt numb for 10 to 15 years. For 3 years she has had pain in her back and knees, especially at night. There have also been attacks of abdominal "colic" not definitely located, occurring usually at night, followed by movements of intestinal gas, nausea, dozing and relief. She thinks she has been jaundiced in some of those attacks, but can give no account of their number. They are rare of late.

In July, 1910, her legs "gave out" and she has been in bed most of the time since. Any motion of the legs causes pain in them and in her back; standing up and sometimes even turning over in bed produces severe pain in her back, not exactly localized. Her feet prickle and the floor feels like a cushion when she stands.

Her appetite is fair. The bowels move daily with Cascara, and her sleep is tolerably good. She has had no fever so far as known, no oedema or cough and no disturbance of micturition except nocturia (1-2).

Examination showed that she stood with the whole spine much bent, so that her height was but 4 feet 10 inches. Her weight was 90 lbs. In the mid dorsal region 4 spinous processes seemed more prominent than normal. The heart and accessible arteries showed nothing abnormal. Throughout the left lung the breathing was diminished but of normal quality with fine crackling sounds. Percussion and palpation negative. Knee jerks exaggerated; double ankle-clonus. No Babinski. Temperature, blood and urine normal.

Diagnosis? Prognosis? Treatment?

CASE 2.

A salesman, 69 years old, had called himself perfectly well until 10 days ago, and has worked steadily up to the time he was seen, March 2d, 1909. Ten days ago he noticed a sense of pressure in the epigastrium when he hurried. For the past week this has been present continually and has been accompanied by some difficulty in sleeping. For three days his legs have been swollen and he has been slightly hoarse and notices some whistling in his throat. Last night he had slight pain in the region of the left axilla. His appetite has been good, his bowels slightly loose as a result of taking a laxative of late. As a rule he has had nocturia (1-2) for some years. This has not been present of late.

On further questioning he recollects that he was told at 21 that he had heart trouble and that he was very nervous and weak at that time, but passed an examination for life insurance at 30 and again at 40.

He has been told that his pulse was often intermittent, but he has felt perfectly well and often ran fast without any discomfort. Examination showed a systolic blood pressure of 190, diastolic 100. The cardiac apex is in the 6th interspace $1\frac{1}{2}$ inches outside the nipple. Immediately following the 1st sound at the apex, is a murmur, which almost dies away in the interval between the 1st and 2d sound, but increases with a crescendo at the end of this interval and is at its maximum just before the second sound, which at the apex is very loud. At the base, the two 2d sounds are of moderate intensity and equal. There is marked irregularity in force and rhythm, apparently of the absolute type. Squeaks and a few fine crackles are evenly distributed throughout both lungs, which show otherwise no abnormality. The patient is so obese that it is difficult to get at any of the peripheral arteries for an estimation of their condition. The abdomen showed nothing abnormal. He had moderate oedema of the legs.

Urine is 1 qt. in 24 hours: specific gravity 1012, .1% albumen, no casts. Blood normal, likewise the reflexes.

Diagnosis? Prognosis? Treatment?

CASE 3.

A fireman, single, 31 years of age, gives the following history:—

F. H. Negative.

P. H. Whooping-cough, measles as a child — always well since. Habits: Tobacco in moderation. Has never used alcohol. Gonorrhoea one and two years ago. Has never had syphilis.

P. I. Twelve days before entrance to hospital he was seized with severe pain all through abdomen. Was “doubled up” with pain for four days. Pain at first diffuse, finally somewhat localized in the right groin. Vomited repeatedly on the first day of illness whenever he tried to take food or medicine. Did not pass any urine for 3 days (?) and when finally urine was passed it gave great relief. Patient states that urine was bloody and has been so more or less since. Urine said to contain about a teaspoonful of “gravel like” material the first time he voided it after onset of pain. Bowels did not move for first 3 days of illness, but since, have been regular. No abnormal color to movements noted. Has never been jaundiced. For several days has had chills followed by sweating. Has felt feverish.

P. E. T. 100° — P. 104 — R. 32 — Well developed and nourished, pupils equal and react — Mucous membranes of good color — Throat not remarkable — Knee jerks present — Heart not remarkable. Lungs negative except for dulness with diminished breath sounds below the 4th space anteriorly and below the angle of the scapula posteriorly on the right side. *Abdomen.* Full firm, tympanitic throughout. Slight resistance on the right side, with considerable tenderness on moderate pressure, not sharply localized. *Liver.* Dulness from 4th rib nipple line to one inch below costal border where an indefinite edge can be felt. Spleen not felt. Kidneys not palpable. No tenderness in costo-vertebral angle. Genitals normal. A few glands in axillae and groins. Hb. 80% — White count 43,000. Smear shows polymorphonuclear leucocytosis. No malarial parasites. Urine — High acid 1029, Albumin slightest possible trace — No sugar. Sediment — Amorphous urates numerous red blood cells, small amount of pus.

Rare granular cast, numerous calcic oxalate crystals. Stool — negative. While under observation the patient had chills, nearly every day with rise of temperature and pulse. The temperature ranging at time of chill from 105 to 107. The pulse on one occasion is recorded at 145. The white count varied from 20,000 to 40,000.

Diagnosis? Prognosis? Treatment?

PEDIATRICS — Professor ROTCH

More credit will be given to an intelligent discussion of the case than to a correct diagnosis unsupported by such discussion.

1. A boy, seven months old, had always been well, except for a very mild attack of whooping-cough from which he had recovered a month before. He was nursed for several months and since then had been given a mixture of whole milk and water with a proprietary food, on which he had thrived. He had a convulsion followed by fever on the morning of April 11th. His temperature had been about 103° F. since then and he had had four more convulsions, the last one during the evening of the 11th. He was given castor oil after the first convulsion and had had as a result several loose, green, faecal movements containing curds. He had not vomited, coughed, or shown any evidence of pain. He was seen at 5 P.M. on April 12th.

Physical examination: He was fairly developed and nourished and of fair color. He was clear mentally. The anterior fontanelle was 3 cm. in diameter and level. There was no rigidity of the neck or neck sign. The pupils were equal and reacted to light. The ear drums were normal. There was no nasal discharge, but the pharynx was slightly reddened. The heart was normal. The respiration was rapid and grunting and the alae nasi were moving. The left chest did not move quite as much as the right and the respiratory sound was not quite so loud in the left back as elsewhere. Nothing else abnormal was detected in the lungs. The level of the abdomen was that of the thorax. It was everywhere tympanitic and there was no tenderness or spasm. The lower border of the liver was palpable 1 cm. below the costal border in the nipple line. The spleen was not palpable. The extremities were normal. There was no spasm or paralysis. The knee jerks were equal and normal. Kernig's sign was absent. There was no enlargement of the peripheral lymph nodes and no efflorescence on the skin. The rectal temperature was 103° F.; the pulse 140; the respirations 72.

(Discuss the above case, giving the differential diagnosis, prognosis, and treatment.)

2. What are the chief conditions in the foetal circulation, the persistence of which result in congenital cardiac disease?

3. A baby, six months old and weighing fifteen and one-half pounds, is taking six feedings of six ounces of the following mixture: —

Gravity Cream	13½ oz.
Skimmed milk	9 oz.
Water	13½ oz.
Milk sugar	2 rounded tablespoonfuls.

It is having two large, hard, crumbly white faecal movements daily. What is the explanation of the peculiar characteristics of these movements ?

Give a prescription for the preparation of a food at a laboratory, which will be suitable for this baby.

State the number of calories and grammes of protein per Kilo. of body weight which your food will give the baby.

4. (a) What is the usual period of incubation in mumps ?
- (b) Give the differential diagnosis from conditions which simulate mumps.
- (c) What is meant by metastatic mumps ?
5. Give the pathology, symptoms, differential diagnosis and treatment of infantile scorbutus.
6. (a) Describe the method of the administration of antitoxin in diphtheria.
- (b) In what ways does diphtheria produce death ?

SURGERY — Professor RICHARDSON

1. What are the symptoms of a case of tuberculosis of the hip in the acute stage ? Describe the treatment.

2. Describe the different methods that can be employed to induce the growth of epithelium over large superficial, granulating areas.

3. How much danger is there to patients in X-Ray exposures ? How much danger to the X-Ray operator ? What precautions should be used when working with the X-Ray ?

4. What symptoms and physical signs would lead you to make a diagnosis of fracture of the neck of the femur ?

5. Describe a sub-coracoid dislocation of the shoulder. What may be its sequelae ?

6. What are the signs and symptoms of concealed haemorrhage ?

7. What is the treatment of a palmar abscess ?

8. What is the treatment of haemorrhoids ?

9. What are the symptoms and treatment of acute cholecystitis ?

10. Give the diagnosis and treatment of cancer of the tongue.

CLINICAL SURGERY — Professor RICHARDSON

A woman of 63, a widow, with nothing in the family history of importance, was taken on April 27th with nausea, vomiting and diarrhoea. The physician succeeded in checking the vomiting and the diarrhoea; but the patient began to have pain "under the 8th, 9th and 10th ribs on the right side." This pain soon got better, but a tenderness remained at the rib margin on the right side. On April 28th there was an evening temperature of 102.5°. On May 1st the physician detected a lump the size of a walnut, he said, at the seat of pain and tenderness. The next day the lump was decidedly larger. The temperature was normal. There was no vomiting. The bowels had moved regularly.

For years the stomach had been "bad." This was all the history that was available, chiefly on account of the patient's poor condition.

The face was deeply flushed -- the cheeks almost cyanotic. The pulse was full and strong, the rate 72. The temperature was normal. Below the rib margin on the right side there was a tender and tympanic tumor about as large as the hand. This tumor did not move with respiration. Its tympany became blended with the liver dulness above and the intestinal tympany below.

The woman was not in any great pain, but she had enough pain slightly to embarrass deep inspiration. Her weight was about 250 pounds.

This patient was immediately removed to a hospital. Her journey aggravated the pain, tenderness, and difficulty of respiration, so that her color was somewhat cyanotic.

- (a) What was the probable diagnosis ?
- (b) What were the indications for operation ?
- (c) What were the contra-indications to operation ?
- (d) What would be your prognosis under the treatment that you advise ?

Thomas H., aged 70, married, foreman in a carpet factory, came to the hospital on April 22, 1912. His family history and personal history were unimportant.

Four days before he entered the hospital he noticed a pimple on his left wrist. He remembered injuring this pimple with the belt or the fly-wheel of his carding machine. That night the arm began to ache, and toward midnight there was considerable swelling. The local doctor incised the swelling and put on linseed poultices, which relieved the pain. The swelling continued for two days longer, and then ceased. Meanwhile the skin lesion had become covered with a dark crust, and three large blebs had formed about the abrasion. The arm became swollen to the shoulder.

There was no headache; there were no gastro-intestinal or genito-urinary symptoms; there were no cardiorenal symptoms. There was no fever. The bowels were regular, moving once or twice a day. The appetite was good. The patient slept well, except for the first night, when pain kept him awake until midnight.

Examination showed, over the lower third of the left forearm on the inner side of the anterior surface, a brawny red swelling, with a dark crust in the centre about the size of a fifty-cent piece. About the crust were three large bullae containing a yellowish serum. On the inner surface of the upper arm, from the elbow to the beginning of the upper half of the humerus, was an ecchymosis. There was a large, soft, non-fluctuating gland of the posterior axillary group in the axilla.

What further investigations would you make ?

What would be your treatment and your prognosis ?

Please give briefly your diagnosis and advise in the following cases.

(a) April 25, 1912. — A woman aged 39 some twenty years ago (July 5, 1892) had both Fallopiian tubes removed for enormous tubercular dilatation. Each tube weighed $1\frac{1}{2}$ pounds. The peritoneum was studded with miliary nodules. Fifteen years ago this patient was married. At the Deaconess Hospital in May, 1909, a large cystic

tumor was removed from the right lobe of the thyroid. There was, as the result of this goitre, dyspnoea, with marked prominence of the eyes.

In April, 1912, the patient noticed a lump in the left breast. The family history was negative. In the left breast, outside the nipple and above it, was a tumor as large as a hen's egg, tender and apparently fluctuating, but painless. Just below this tumor there was a smaller and harder one, to which the skin was adherent, and over which on lateral pressure the skin dimpled. Enlarged lymph nodes could be felt in the axilla. There were no other symptoms whatever, either constitutional or local.

What would you advise in this case? Please give your reasons for this advice.

(b) Fifteen years ago a woman of 77 had had the right breast partially removed for tumor. The axilla was not dissected, nor were the pectoral muscles removed. At the sternal end of the scar a small, hard irregular tumor was discovered early in 1912. This tumor grew rapidly. It was painless, though somewhat tender, and the skin was adherent to it.

What should you say as to the probable nature of the original tumor; and what would you advise in the present one?

OBSTETRICS — PROFESSOR GREEN

1. What are the shape, size, and consistency of a normally pregnant uterus at the end of the sixth lunar month? Give a differential diagnosis between such a uterus and other abdominal tumors with which it may be confounded.

2. What is the clinical picture of so-called toxæmia of pregnancy? What laboratory examinations and physical findings would aid in establishing the diagnosis?

3. Presuming that there has been opportunity for complete physical examination of a primigravida within a few days of labor at term, under what circumstances may a well-taught obstetrician expect to conduct labor without a single vaginal examination? What circumstances arising during labor would make it seem advisable to explore the pelvis from below?

4. What is the most frequent site of extra-uterine pregnancy? What are the possible consequences of this form of ectopic gestation?

5. What are the signs of inevitable abortion in the third month? Aside from infection what is the chief maternal danger, and how should it be met?

6. In a primipuerpera, on the evening of the second day after a long, but unassisted, delivery at term, the temperature rises from normal to 104.5° F. with a corresponding rise in pulse; in the absence of other possible causes the uterus is suspected, a culture is taken, and the uterus is thoroughly irrigated; next morning the culture shows a pure growth of streptococcus pyogenes, and the temperature stands at 103.8° F.: how would you proceed with the treatment of the case?

7. Called to a recently delivered sextipuerpera on account of haemorrhage, a consultant is informed by the midwife in attendance that after the rather precipitate birth of the foetus she had sought to deliver the placenta by pulling on the cord; to her surprise the placenta came away quite easily, but with it came a mass looking like a large fibroid, to which the placenta was still partly attached: a second dose of ergot had failed to arrest the haemorrhage. Follow the consultant in his diagnosis and treatment of this case.

8. What is the normal mechanism of delivery in posterior positions of the occiput? Why is a knowledge of the mechanism of normal labor essential to successful obstetric surgery?

9. A consultant is called to a multipara who has been in active labor for twelve hours: the attending physician had failed to deliver with forceps after several attempts. The uterus is found in tonic contraction; the foetal heart is no longer audible; the vulva is oedematous; the woman has a pulse of 112. By vagina the head is found presenting in F.D.P. position, firmly engaged in the pelvic brim. The os uteri is somewhat oedematous, but fully dilatable: external pelvimetry shows no pelvic contraction, indeed all previous labors had been normal. Were you the consultant, how would you proceed with this case?

10. What is the chief exciting cause of ophthalmia neonatorum? What prophylactic measures may generally prove effectual?

GYNAECOLOGY — Professor GREEN

1. Retroversion of the uterus: most common causes, symptoms, diagnosis? How may the retroverted uterus be replaced? What are the commonest obstacles to replacement? By what measures may the replaced uterus be retained in normal position?

2. What are the most common exciting causes of pelvic infection? Once introduced, by what routes may bacterial invasion involve any or all of the genito-urinary organs. What glands at the portals of the genito-urinary organs are liable to harbor infecting organisms and give rise to repeated re-infections?

3. Carcinoma of the cervix uteri: early symptoms, clinical appearance, diagnosis? How would you distinguish between operable and inoperable cases? With what common affection may carcinoma of the cervix be confused, and how may the differential diagnosis be made?

4. Aside from surgical mutilation and congenital defects what are the chief causes of amenorrhoea in young virgins? Outline the treatment of this symptom, according to its ascertained cause.

DERMATOLOGY — Professor WHITE

1. The treatment of impetigo contagiosa.
2. Differential diagnosis between alopecia areata, alopecia of ringworm and alopecia furfuracea.
3. Pityriasis rosea.
4. The treatment of herpes zoster.
5. Differential diagnosis of ringworm and favus of the scalp.

SYPHILIS — Professor Post

1. What is the incubation stage of syphilis ?
2. With a doubtful primary sore what general symptoms may you expect as the earliest evidence of the presence of syphilis ?
3. What is the value of a negative Wasserman ?
4. What are the relative values of mercury and salvarsan ?
5. Define Colles Law and describe the condition of the mothers.

NEUROLOGY — Professor PUTNAM

Answer four questions.

1. Give [by name] forms of neuritis leading, respectively to
 - (a) motor;
 - (b) sensory;
 - (c) trophic; symptoms.
2. What other diseases besides tabes give rise to ataxia of motion ?
3. What diseases lead to paraesthesia of the hands and feet ?
4. Under what forms may insular sclerosis show itself; that is, what difficulties may the differential diagnosis present ?
5. To what groups of symptoms does syphilis of the central nervous system give rise, besides those of tabes, and general paresis ?
6. Describe Freud's view of the pathogenesis of hysteria.

PSYCHIATRY — Dr. COWLES

1. Describe briefly the reflex arc; and the variations of threshold resistances, with certain accompanying mental symptoms that may be thus explained.
2. Define (a) Delusions,
(b) Hallucinations,
(c) Catatonia.
3. Describe briefly the early signs of General Paralysis.
4. CASE. — A young woman, 20 years old, single, American. No neuropathic heredity. She had scarlet fever, measles and pertussis as a child; a "scrofulous gland" in the neck removed at 8 years. She was never a good student though promoted yearly at school. At 13 had eye trouble of "nervous origin"; catamenia began at 13, and regular ever since.

In third year at High School was "over tired" and taken out for a time; "concentration" was difficult and she often sat up late studying. Since leaving school a year ago she has been at home helping efficiently

in the household. Until lately active, athletic, cheerful and readily made friends; no love affairs.

During the past year her emotional nature has been exercised by religious interests; brought up as a Unitarian. She prepared for confirmation in the Episcopal church. In the summer of 1910 morbid sadness appeared, self-reproach and fears of injury, — told her mother of abusing herself — possibly contributive to her neurasthenic condition, or the common exaggeration of self-blame; the sadness intensifying she brooded much and “wished she could get back to the cheerful days before the habit had taken hold of her”; spoke of suicide but only vaguely; took less food, complained somewhat of pain in back, easily irritated, and slightly apprehensive of “burglars,” etc. In autumn improved and seemed quite natural; but at Brockton Fair became over tired, showed signs of over activity, going quickly from one thing to another; improved again in winter.

In Feb. 1911 she went to New York, got tired, “became very nervous and pale, and acted strangely.” Her father sent for had difficulty in persuading her to go home. Then followed increased activity in religion, carelessness in dress, restlessness — worse at catamenia; was very talkative, refused to eat much and sometimes lay in bed refusing food altogether; lost weight. She had no ideas of influence, no stereotyped attitudes, no apathy, no weakness of memory, no hallucinations. Admitted as a voluntary patient to McLean Hospital, March 31, 1911.

In Hospital. — On admission, active, no sleep in first night, talking loudly most of the time, or singing and whistling, and would n’t stay in bed, said: “Watch me climb that tree” and climbed up on the bureau. Laughed often, — occasionally profane; had marked though unproductive flight of ideas, showed rapid change of purpose in acts, somewhat distractible; poverty of ideas but no verbigeration. This condition continued, — sometimes irritable and again exhilarated. Appetite became very good.

May 16, 1911. Examination by a student for a clinical report. . . . “Patient seen in about the same condition as above described: loquacious, happy, expression chiefly smiling with an occasional grimace but often changing to a momentary look of mock solemnity. Oriented as to time and place she showed no appreciation of what was wrong with herself, or with other noisy patients. There was some distractibility and tendency to rhyming. I asked if she could weave baskets, she replied: “Oh my, yes! Weave? I can make all kinds of figures. I do my hair up in figure-of-eights.” Asked what the connection was between baskets and her hair, she said: “Oh! I always see connections, — resemblances between people you know! Asked the sum of 16 and 7 she could n’t keep her mind on the problem but went on talking; finally being pressed for an answer she said: “20, no 23-skidoo!” and went on joking and rhyming. Her physical condition seemed less good than when seen (by the examiner) some weeks previously, but she had just had her catamenia and a period of excitement worse than any previous one.”

What is the diagnosis and the chief question in making it? Point out the underlying principle involved in the changes of physical condition, through the course of the illness, that may explain the accompanying mental symptoms. Prognosis and treatment?

OPHTHALMOLOGY — Professor STANDISH

1. The Helmholtz theory of accommodation.
2. Diagnosis of Trachoma. What are its ordinary complications ?
3. Describe the treatment of a case of convergent strabismus arising in a child three years of age.
4. What is the Argyll-Robertson pupil and in what diseases may it be present ?
5. Name the various ocular conditions which may be due to syphilis.

OTOLOGY — Professor BLAKE

1. Describe the contour of the external auditory canal.
2. What is the relation of the nerviduct of the facial to the middle ear ?
3. What is the function of the stapedius muscle ?
4. What intratympanic changes would result from a prolonged closure of the tympanopharyngeal tube ?
5. What method would you employ for inflation of the middle ear ?
6. Describe a paracentesis of the drum-head.

LARYNGOLOGY — Professor COOLIDGE

1. The etiology and symptoms of deviations and spurs of the septum.
2. Describe the alterations in the mucous membrane in
 - (a) atrophic rhinitis.
 - (b) vaso-motor rhinitis.
3. Draw and describe the post-nasal image as seen in the rhinoscopic mirror.
4. Describe adenoids.
5. Describe the nerve supply of the larynx, and the more common paralyses.

THE MEDICAL SCHOOL

CANDIDATES FOR THE DEGREE OF DOCTOR OF PUBLIC HEALTH

Armstrong, Ronald Budd, PH.B. (<i>Lafayette Coll.</i>)	
1908, A.M. (<i>Columbia Univ.</i>) 1912, M.D. (<i>ibid.</i>)	
1912,	<i>Easton, Pa.</i>
Chüan, Shaoching Hsipo, M.D. (<i>Imperial Medical College, China</i>) 1906,	<i>Tientsin, China.</i>
Frost, William Dodge, S.B. (<i>Univ. of Minnesota</i>)	
1893, S.M. (<i>ibid.</i>) 1894, PH.D. (<i>Univ. of Wisconsin</i>)	
1903,	<i>Madison, Wis.</i>

FOURTH CLASS

Blake, Francis Gilman, A.B. (<i>Dartmouth Coll.</i>)	
1908,	<i>Cambridge.</i>
Borden, Russell Porter, A.B. (<i>Mt. Allison Coll.</i>)	
1908,	<i>Lower Canard, N.S.</i>
Buffum, William Potter, Jr., A.B. (<i>Brown Univ.</i>)	
1909,	<i>Newport, R.I.</i>
Butler, Fergus Almy, A.B. 1908,	<i>Danvers.</i>
Carter, James Charles, A.B. (<i>De Pauw Univ.</i>) 1909,	<i>Shelbyville, Ind.</i>
Clark, DeWitt Scoville, Jr., A.B. (<i>Yale Univ.</i>) 1909,	<i>Salem.</i>
Cobb, Stephen Aratas, Jr., A.B. (<i>Bates Coll.</i>) 1909,	<i>Gardiner, Me.</i>
Cole, Norman Brown, A.B. 1909,	<i>Newport, R. I.</i>
Cunningham, Allan Rowe, A.B. 1909,	<i>Gloucester.</i>
Curtis, Charles Samuel, A.B. (<i>Clark Univ.</i>) 1909,	<i>Spencer.</i>
Cutler, Elliott Carr, A.B. 1909,	<i>Brookline.</i>
Denny, George Parkman, A.B. 1909,	<i>Chestnut Hill.</i>
Dolan, William Francis, A.B. 1910,	<i>Somerville.</i>
Faulkner, James Francis, A.B. (<i>Bates Coll.</i>) 1908,	<i>Gardiner, Me.</i>
Favill, John, A.B. (<i>Yale Univ.</i>) 1909,	<i>Chicago, Ill.</i>
Ferguson, Luther Mitchell, A.B. 1910,	<i>Pekin, China.</i>
Frost, Harold Maurice, A.B. (<i>Brown Univ.</i>) 1909,	<i>Tiverton, R. I.</i>
Gilchrist, John Milton, S.B. (<i>Cornell Coll.</i>) 1909,	<i>Waukon, Ia.</i>
Goodwin, Harold Merle, A.B. (<i>Bates Coll.</i>) 1908,	<i>Lincoln, Me.</i>
Goodwin, Ralph Augustus, A.B. (<i>Bates Coll.</i>) 1908,	<i>Lincoln, Me.</i>
Greene, Jeremiah Augustine, A.B. 1909,	<i>Cambridge.</i>

- Grinnell, Francis Browne, A.B. 1909,
 Hill, Lewis Webb, A.B. 1910 (1909),
 Jacobs, Irving William, A.B. 1909,
 Kaiser, Albert David, S.B. (*Univ. of Rochester*)
 1909, *Brookline.*
Jamaica Plain.
Boston.
Rochester, N. Y.
 Kilgore, Alson Raphael, S.B. (*Univ. of California*)
 1909, *Fruitvale, Cal.*
 Krout, Boyd Merrill, PH.B. (*Ohio Univ.*) 1909, *Dresden, O.*
 Krusen, Francis Twining, A.B. (*Ursinus Coll.*) 1909, *Norristown, Pa.*
 Lavelle, Thomas Eugene, A.B. (*Georgetown Univ.*)
 1909, *Butte, Mont.*
 Lennox, William Gordon, A.B. (*Colorado Coll.*) 1909, *Colorado Springs, Colo.*
 Leonard, Edward DeWitt, A.B. (*Amherst Coll.*)
 1909, *Brattleboro, Vt.*
 Liu, Jui Heng, S.B. 1909, *Tientsin, China.*
 MacKnight, William Frank, A.B. (*Holy Cross Coll.*)
 1908, *Fall River.*
 Medlar, Edgar Matthias, S.B. (*Doane Coll.*) 1908,
 A.M. (*Univ. of Nebraska*) 1911, *Crete, Neb.*
 Morrison, William Reid, A.B. 1910, *E. Boston.*
 Neves, Charles Serpa, A.B. 1911 (1910), *Providence, R. I.*
 Papas, Prodromos Nicholas, A.B. (*Anatolia Coll.*)
 1907, *Boston.*
 Pierson, Philip Hale, A.B. (*Yale Univ.*) 1908, *Wellesley Hills.*
 Ruggles, Howard Edwin, A.B. (*Leland Stanford*
Jr. Univ.) 1907, *Ross, Cal.*
 Rupp, Roger Ralph, S.B. (*Muhlenburg Coll.*) 1909, *Lehighton, Pa.*
 Saad, Abdelmalik, A.B. (*Assiout Coll.*) 1908, *Tehel Barood, Egypt.*
 Shain, Abraham Isidor, A.B. 1909, *Roxbury.*
 Shapira, Albert Abraham, S.B. 1910, *Boston.*
 Sheehan, Edward Bernard, A.B. (*Boston Coll.*) 1909, *Roxbury.*
 Sisson, Mitchell, A.B. 1910, *E. Boston.*
 Stookey, Byron Polk, A.B. (*Univ. of Southern Cali-*
fornia) 1908, A.M. (*Harvard Univ.*) 1909, *Los Angeles, Cal.*
 Strong, Seth Lake, A.B. (*Oberlin Coll.*) 1909, *Marshfield Hills.*
 Ten Broeck, Carlon, A.B. (*Univ. of Illinois*) 1908, *Parsons, Kan.*
 Terrall, John Jay, S.B. (*Cornell Coll.*) 1907, *Hudson, Ia.*
 Towne, Edward Bancroft, A.B. 1906, *San Francisco, Cal.*
 Van Meter, Abram Lee, A.B. (*Univ. of Kansas*)
 1909, *Parsons, Kan.*
 Walker, Melvin Harvey, Jr., A.B. (*Yale Univ.*)
 1909, *Westboro.*

Warren, Charles Fletcher, PH.B. (<i>Brown Univ.</i>) 1909,	<i>Auburn, R. I.</i>
Webber, Wolfert Gerson, A.B. 1909,	<i>Boston.</i>
Wentworth, Edward Tubbs, A.B. 1909,	<i>Somerville.</i>
Wentworth, John Alexander, A.B. (<i>Bowdoin Coll.</i>) 1909,	<i>Portland, Me.</i>
Wickham, Thomas William, A.B. (<i>Holy Cross Coll.</i>) 1909,	<i>So. Lee.</i>

THIRD CLASS

Albee, Kenneth Field, PH.B. (<i>Brown Univ.</i>) 1910,	<i>Wollaston.</i>
Alton, Benjamin Harrison, S.B. (<i>So. Dakota State Coll.</i>) 1908, S.M. (<i>ibid.</i>) 1910,	<i>Brookings, So. Dak.</i>
Andrews, Sumner Cheever, A.B. 1910,	<i>Gloucester.</i>
Aub, Joseph Charles, A.B. 1911,	<i>Cincinnati, O.</i>
Bachman, George Warren, A.B. 1908,	<i>Wilkes-Barre, Pa.</i>
Beard, Archibald Hildreth, A.B. (<i>Kansas Univ.</i>) 1910,	<i>La Junta, Colo.</i>
Bill, José Penteado, A.B. (<i>Dickinson Coll.</i>) 1907,	<i>Harrisburg, Pa.</i>
Binger, Carl Alfred Lanning, A.B. 1910,	<i>New York, N. Y.</i>
Bowes, Frank Arthur, A.B. (<i>Holy Cross Coll.</i>) 1910,	<i>Waterbury, Conn.</i>
Brett, Afley Leonel, A.B. (<i>Brown Univ.</i>) 1910,	<i>So. Braintree.</i>
Brown, Herbert Rutherford, S.B. (<i>Univ. of Rochester</i>) 1901,	<i>Jamaica Plain.</i>
Burket, Ivan Roy, A.B. (<i>Univ. of Kansas</i>) 1910, A.M. (<i>ibid.</i>) 1911,	<i>Wetmore, Kan.</i>
Burpee, Benjamin Prescott, A.B. (<i>Dartmouth Coll.</i>) 1909,	<i>Manchester, N. H.</i>
Caro, Heiman, A.B. 1911 (1910),	<i>Chelsea.</i>
Cheever, Austin Walter, A.B. 1910,	<i>Mattapan.</i>
Cobb, Stanley, A.B. 1910,	<i>Milton.</i>
Cohen, Joseph Powitzer, A.B. 1909,	<i>Newburgh, N. Y.</i>
Cook, Ward Hance, A.B. (<i>Univ. of Kansas</i>) 1909, A.M. (<i>ibid.</i>) 1910,	<i>Kansas City, Mo.</i>
Cragin, Horace Stuart, S.B. (<i>Amherst Coll.</i>) 1910,	<i>Brooklyn, N. Y.</i>
Crawford, Clay, A.B. (<i>Yale Univ.</i>) 1909,	<i>Ft. Thomas, Ky.</i>
Donovan, Jeremiah John, A.B. (<i>Boston Coll.</i>) 1900,	<i>Randolph.</i>
Durrett, James Johnson, S.B. (<i>Univ. of Alabama</i>) 1908,	<i>Northport, Ala.</i>
Fay, William James, A.B. (<i>Clark Univ.</i>) 1910,	<i>Worcester.</i>
Fernández, Miguel Joaquin, A.B. (<i>Colegio Píñillos, Colombia, S. A.</i>) 1907,	<i>Mompox, Colombia, S. A.</i>
Fiske, Cyrus Hartwell, A.B. (<i>Univ. of Minnesota</i>) 1910,	<i>St. Paul, Minn.</i>

- Fornell, Carl Hernfrid, A.B. 1910,
 Foster, Thomas Albert, A.B. (*Dartmouth Coll.*)
 1910,
 Gillette, George Henry, A.B. (*Cornell Coll.*) 1910,
 Gosline, Harold Inman, A.B. 1909,
 Gray, Horace, A.B. 1909,
 Green, Hyman, A.B. 1911,
 Hanchett, Alsoberry Kaumu, A.B. 1911 (1910),
 Hill, Frederick Thayer, S.B. (*Colby Coll.*) 1910,
 Hyde, Harold Valmore, S.B. (*Dartmouth Coll.*)
 1910,
 Johnson, Harold Bartlett, A.B. 1911,
 Leavitt, Peirce Henry, S.B. 1910,
 Lehman, Edwin Partridge, A.B. (*Williams Coll.*)
 1910,
 Levine, Samuel Albert, A.B. 1911,
 Long, James Harmount, A.B. (*Ohio Wesleyan Univ.*) 1904, A.M. (*ibid.*) 1907,
 Louis, Lawrence Joseph, Jr., A.B. (*Holy Cross Coll.*) 1910,
 Lunt, Lawrence Kirby, A.B. 1909,
 Lurier, Israel, A.B. (*Clark Univ.*) 1910,
 McMahon, William Edward Roche, A.B. (*Holy Cross Coll.*) 1910,
 Marvin, Frank William, A.B. 1910,
 Millet, John Alfred Parsons, A.B. 1910,
 Moor, Henry Britt, S.B. (*Colby Coll.*) 1910,
 Morrison, Wayland Augustus, A.B. (*Leland Stanford Jr. Univ.*) 1910,
 Morrissey, John Henry, Jr., A.B. (*Brown Univ.*)
 1910,
 Munro, Donald, A.B. 1911,
 New, Way-sung, A.B. (*St. John's Coll.*) 1910,
 Ohler, William Richard, S.B. 1910,
 Packard, George Byron, Jr., A.B. (*Univ. of Colorado*) 1910,
 Richardson, Henry Barber, A.B. 1910,
 Rochford, Richard Augustine, A.B. (*Holy Cross Coll.*) 1910,
 Root, Raymond Richmond, S.B. (*Dartmouth Coll.*) 1905,
 Schofield, Roger William, A.B. (*Clark Univ.*) 1910,
- Quincy.
 Portland, Me.
 Bayport, N. Y.
 Worcester.
 Boston.
 Boston.
 Waimea, Hawaii.
 Waterville, Me.
 Lynn.
 Cattaraugus, N. Y.
 Cambridge.
 Redlands, Cal.
 Roxbury.
 Cambridge.
 Newport, R. I.
 Colorado Springs, Colo.
 Worcester.
 Worcester.
 Cambridge.
 So. Lincoln.
 Waterville, Me.
 Los Angeles, Cal.
 Bristol, R. I.
 Boston.
 Shanghai, China.
 Bethel, Conn.
 Denver, Colo.
 Boston.
 Newton Lower Falls.
 Brookline.
 Worcester.

Shohl, Alfred Theodore, A.B. 1910,	<i>Cincinnati, O.</i>
Solomon, Harry Caesar, S.B. (<i>Univ. of California</i>)	
1910,	<i>Los Angeles, Cal.</i>
Stevens, Harold Wentworth, A.B. (<i>Bates Coll.</i>)	
1906,	<i>Saco, Me.</i>
Stoddard, James Leavitt, A.B. 1910,	<i>Northampton.</i>
Vernlund, Carl Frithiof, S.B. (<i>So. Dakota State</i>	
<i>Coll.</i>) 1909,	<i>Jungskola, Sweden.</i>
Washburn, Arthur Lawrence, A.B. 1910,	<i>New York, N. Y.</i>
Winchester, Harold Eugene, S.B. (<i>Dartmouth</i>	
<i>Coll.</i>) 1910,	<i>Bismarck, No. Dak.</i>
Withington, Paul, A.B. 1909,	<i>Cambridge.</i>
Wright, Wade Stanley, S.B. (<i>Univ. of Pitts-</i>	
<i>burgh</i>) 1910,	<i>Pittsburgh, Pa.</i>

SECOND CLASS

Allen, Edward Bartlett, A.M. (<i>Brown Univ.</i>) 1911,	<i>Centreville, R. I.</i>
Allen, Walter Charles, S.B. (<i>Univ. of Rochester</i>)	
1911,	<i>Rochester, N. Y.</i>
Amiral, Hiram Hygazon, A.B. (<i>Univ. of Rochester</i>)	
1911,	<i>Rochester, N. Y.</i>
Appleton, Paul, PH.B. (<i>Brown Univ.</i>) 1911,	<i>Providence, R. I.</i>
Aschmann, Theodore Henry, A.B. (<i>McPherson</i>	
<i>Coll.</i>) 1908, A.M. (<i>Univ. of Kansas</i>) 1911, S.M.	
(<i>ibid.</i>) 1912,	<i>Inman, Kan.</i>
Babington, Vernon Edgar, A.B. (<i>Brown Univ.</i>)	
1911,	<i>Edgewood, R. I.</i>
Bock, Arlie Vernon, A.B. (<i>Upper Iowa Univ.</i>) 1910,	<i>New Albin, Ia.</i>
Bridges, Edwin Stanley, A.B. (<i>Univ. of New Bruns-</i>	
<i>wick</i>) 1908,	<i>St. John, N. B.</i>
Bronk, Marcellus, A.B. (<i>Cornell Univ.</i>) 1910,	<i>Amsterdam, N. Y.</i>
Brown, George Percy, A.B. (<i>Yale Univ.</i>) 1911,	<i>Barre.</i>
Brown, Harry Henderson, Jr., A.B. (<i>Univ. of</i>	
<i>Texas</i>) 1910,	<i>Yoakum, Texas.</i>
Bumpus, Hermon Carey, Jr., PH.B. (<i>Brown Univ.</i>)	
1912,	<i>Madison, Wis.</i>
Bunker, Henry Alden, Jr., A.B. 1910,	<i>Brooklyn, N. Y.</i>
Caldarone, Alfred Anthony, A.B. (<i>Holy Cross Coll.</i>)	
1911,	<i>Providence, R. I.</i>
Clason, Freeman Pell, A.B. (<i>Bates Coll.</i>) 1911,	<i>Gardiner, Me.</i>
Cleaves, Edwin Nelson, A.B. 1911,	<i>Medford.</i>
Cline, Samuel, S.B. 1911,	<i>Roxbury.</i>

- Cook, Edgar Charles, A.B. (*Lake Forest Coll.*) 1911, *Mendota, Ill.*
 Cummings, Edward Joseph, A.B. (*Boston Coll.*) 1911, *So. Boston.*
 Curtin, John Francis, A.B. (*Holy Cross Coll.*) 1911, *Lawrence.*
 Devine, Bernard Francis, A.B. 1911, *So. Boston.*
 Diehl, Oliver Roland, A.B. 1912, *Newport, R. I.*
 Dolahar, John Edward, A.B. (*Boston Coll.*) 1912, *Boston.*
 Donnell, Clyde Henry, A.B. (*Howard Univ.*) 1911, *Greensboro, N. C.*
 Downing, John Godwin, A.B. (*Boston Coll.*) 1911, *So. Boston.*
 Durkin, Harry Anthony, A.B. (*Holy Cross Coll.*) 1911, *Peoria, Ill.*
 Dwinell, George Francis, A.B. (*Dartmouth Coll.*) 1911, *Manchester, N. H.*
 Edwards, Henry William, Jr., S.B. (*Univ. of Rochester*) 1911, *Rochester, N. Y.*
 Edwards, Sumner, A.B. (*Bowdoin Coll.*) 1910, *Bethel, Me.*
 Edwards, Walter Davis, A.B. (*Univ. of Rochester*) 1911, *Rochester, N. Y.*
 Fein, Harry, A.B. 1911, *Boston.*
 Flagg, Charles Monroe, S.B. 1905, *Cambridge.*
 Foley, John Arthur, A.B. 1911, *Dorchester.*
 G  n  reux, Edmond Alfred, A.B. (*Holy Cross Coll.*) 1911, *Webster.*
 Gibson, Arthur Collis, A.B. (*Bowdoin Coll.*) 1911, *Jamaica Plain.*
 Gillespie, Norman Wilkinson, S.B. (*Tufts Coll.*) 1911, *Dorchester.*
 Gillon, Charles Joseph Carroll, PH.B. (*Holy Cross Coll.*) 1911, *Taunton.*
 Gilpatrick, Leon Southard, A.B. (*Colby Coll.*) 1909, *Hartland, Me.*
 Grabfield, Gustave Philip, A.B. (*Williams Coll.*) 1912, *Cincinnati, O.*
 Hankey, Daniel Clyde, A.B. (*Westminster Coll.*) 1909, *New Wilmington, Pa.*
 Hodgson, John Sprague, PH.B. (*Brown Univ.*) 1912 (1911), *Esmond, R. I.*
 Hudson, Carl Bibb, A.B. 1912 (1911), *Montgomery, Mo.*
 Jackson, Arthur Morison, S.B. (*Dartmouth Coll.*) 1911, *Everett.*
 Janney, James Craik, A.B. 1911, *Wynnewood, Pa.*
 Johnson, Odin James, A.B. (*Univ. of Minnesota*) 1911, *Lyle, Minn.*
 Kibby, Sydney Vernon, A.B. 1907, *Everett.*

- Lawler, John Charles, A.B. (*Holy Cross Coll.*) 1911, *Bellows Falls, Vt.*
- McCaffrey, Jerome Joseph, A.B. (*Holy Cross Coll.*) 1911, *Attleboro.*
- McGuire, Joseph Hoshal, A.B. (*Eureka Coll.*) 1911, *Eureka, Ill.*
- MacPherson, Donald John, S.B. (*Univ. of Rochester*) 1911, *Palmyra, N. Y.*
- McQuesten, Philip, A.B. (*Dartmouth Coll.*) 1911, *Nashua, N. H.*
- Magoon, Charles Elmer, Jr., A.B. (*Morningside Coll.*) 1910, *Boston.*
- Mallory, Meredith, A.B. (*Univ. of Illinois*) 1911, *Batavia, Ill.*
- Meaker, Samuel Raynor, A.B. (*Princeton Univ.*) 1911, *Carbondale, Pa.*
- Montgomery, James Blaine, A.B. (*Dartmouth Coll.*) 1911, *Boston.*
- Montgomery, Orland Franklin, A.B. (*Leland Stanford Jr. Univ.*) 1910, *Tulare, Cal.*
- Morriss, William Sarsfield, A.B. 1911, *Fall River.*
- Murray, George Aloysius, A.B. (*Boston Coll.*) 1909, *So. Boston.*
- Oslin, Joseph Edwin, A.B. (*Brown Univ.*) 1910, *Providence, R. I.*
- Packard, Fabyan, A.B. 1912, *Allston.*
- Peck, Martin William, S.B. (*Dartmouth Coll.*) 1902, *Lynn.*
- Perkins, William Albert, A.B. 1912, *Ogden, Utah.*
- Plouffe, Bernard Louis, A.B. (*Holy Cross Coll.*) 1911, *Webster.*
- Raia, Joseph Ernest, A.B. (*Brown Univ.*) 1911, *Providence, R. I.*
- Redden, William Rufus, A.B. (*Bates Coll.*) 1906, *Hyde Park.*
- Richardson, Ira Walter, A.B. (*Colby Coll.*) 1910, *Keenebunk, Me.*
- Sharry, Charles Francis, A.B. 1910, *Somerville.*
- Sowles, Horace Kennedy, A.B. (*Clark Univ.*) 1910, *Barre, Vt.*
- Spruit, Charles Booth, A.B. (*Illinois Coll.*) 1908, *Jacksonville, Ill.*
- Stern, Newton Samuel, A.B. 1912, *Memphis, Tenn.*
- Strauss, Arthur Edgar, S.B. 1912, *St. Louis, Mo.*
- Thaxter, Langdon Thom, A.B. (*Williams Coll.*) 1911, *Portland, Me.*
- Thomas, Harold, A.B. (*Acadia Coll.*) 1910, *Wollaston.*
- Tucker, Cassell Clark, A.B. (*De Pauw Univ.*) 1911, *Greencastle, Ind.*
- Van Gorder, George Wilson, A.B. (*Williams Coll.*) 1911, *Pittsburgh, Pa.*
- Van Stone, Leonard Mathews, A.B. (*Colorado Coll.*) 1911, *Waco, Tex.*

Woodward, Harry Whiting, A.B. (*Bowdoin Coll.*)

1910,

Colorado Springs, Colo.

Wright, Louis Tompkins, A.B. (*Clark Univ.,
Atlanta, Ga.*) 1911,

Atlanta, Ga.

FIRST CLASS

Aaronson, Jacob, A.B. 1912,

Chelsea.

Astrin, Albert, A.B. 1911,

Boston.

Barrow, William Hulbert, A.B. 1908,

Chelsea.

Bennet, DaCosta Fitzmaurice, A.B. (*Univ. of
Maine*) 1909,

Lubec, Me.

Betteridge, Lawrence Augustine, A.B. 1912,

Boston.

Bigelow, George Hoyt, A.B. 1913 (1912),

Framingham.

Brennan, James Thomas, A.B. (*Rock Hill Coll.*)
1909,

Clarksburg, W. Va.

Briggs, Maurice Taggart, A.B. 1912,

E. Lynn.

Buckman, Thomas Ellwood, A.B. 1912,

Jacksonville, Fla.

Burton, Caspar Henry, Jr., A.B. 1909,

Cincinnati, O.

Butler, Edmund John, A.B. (*Boston Coll.*) 1912,

Cambridge.

Churchill, Kenneth, A.B. (*Bowdoin Coll.*) 1912,

Newtonville.

Dillon, Edward Saunders, A.B. (*Princeton Univ.*)
1911,

Woodbury, N. J.

Dole, Kenneth Llewellyn, A.B. (*Leland Stanford
Jr. Univ.*) 1912,

Riverside, Cal.

Gilbert, John Joseph, A.B. (*Brown Univ.*) 1912,

Woonsocket, R. I.

Goethals, Thomas Rodman, A.B. 1912,

Culebra, C. Z., Panama.

Golden, Ross, A.B. (*Cornell Coll.*) 1912,

Boone, Ia.

Grace, Clarence Milo, A.B. (*Washington State
Univ.*) 1912,

Chillicothe, Mo.

Gregg, Alan, A.B. 1911,

Chestnut Hill.

Gustafson, Paul, A.B. 1912,

Cambridge.

Hamilton, John Homer, S.B. (*Oklahoma Agricul-
tural and Mechanical Coll.*) 1910,

Stillwater, Okla.

Harding, Edward, A.B. 1911,

Boston.

Harris, Carl Thorburn, S.B. (*Univ. of Rochester*)
1912,

Rochester, N. Y.

Hodgdon, Frank Wellington, Jr., A.B. 1911,

Arlington.

Horton, Lydiard Heneage, A.B. (*Williams Coll.*)
1901, A.M. (*Columbia Univ.*) 1911,

Boston.

Houston, David Walker, Jr., A.B. (*Princeton Univ.*)
1912,

Troy, N. Y.

Hurst, Benoni Price, A.B. (<i>Amherst Coll.</i>) 1912,	<i>Baltimore, Md.</i>
Hyman, Clarence Henry, S.B. (<i>Heidelberg Univ.</i>) 1911,	<i>Payne, O.</i>
Koefod, Hilmar, S.B. (<i>Beloit Coll.</i>) 1911,	<i>Glenwood, Minn.</i>
Lacey, Walter Hamer, A.B. 1912,	<i>Wollaston.</i>
Langmann, Alfred Gustav, A.B. 1912,	<i>New York, N. Y.</i>
Lanman, Thomas Hinckley, A.B. 1912,	<i>Cambridge.</i>
Learned, Elmer Turell, A.B. (<i>Yale Univ.</i>) 1912,	<i>Fall River,</i>
Levanzin, Agostino, A.B. (<i>Malta Univ.</i>) 1895,	<i>Cospicua, Island of Malta.</i>
Lowry, Franklin Patterson, S.B. 1912,	<i>Newton.</i>
Lyon, Arthur Bates, A.B. (<i>Amherst Coll.</i>) 1912,	<i>Brockton.</i>
McIntyre, John Archibald, S.B. (<i>Cornell Coll.</i>) 1912,	<i>Mt. Vernon, Ia.</i>
*Marlow, Searle Bisset (<i>Harvard</i>),	<i>Syracuse, N. Y.</i>
Moffat, Barclay Wellington, A.B. 1912,	<i>Orange, N. J.</i>
Morris, Samuel Leslie, Jr., S.B. (<i>Davidson Coll.</i>) 1911,	<i>Atlanta, Ga.</i>
Murphy, William David, A.B. (<i>Boston Coll.</i>) 1911,	<i>Roxbury.</i>
Nichols, Andrew, 3d, A.B. 1912,	<i>Hathorne.</i>
Nissen, Harry Archibald, A.B. (<i>Univ. of So. Dakota</i>) 1911,	<i>Vermillion, So. Dak.</i>
Oberg, Frank Thorwald, A.B. (<i>Clark Coll.</i>) 1912,	<i>Worcester.</i>
Ouimet, Joseph Arcade, S.B. (<i>Laval Univ.</i>) 1911,	<i>Leominster.</i>
*Parker, Frederic, Jr. (<i>Harvard</i>),	<i>Bedford.</i>
Peabody, Charles William, A.B. 1912,	<i>Malden.</i>
Putnam, James Jackson, Jr., A.B. 1912,	<i>Boston.</i>
Ragle, Benjamin Harrison, A.B. (<i>De Pauw Univ.</i>) 1912,	<i>Spencer, Ind.</i>
Rapport, David Louis, A.B. 1912,	<i>Pittsburgh, Pa.</i>
Redway, Lawrence David, A.B. 1912,	<i>Cincinnati, O.</i>
Rhea, Clarence Ward, A.B. (<i>Austin Coll.</i>) 1910,	<i>Forney, Tex.</i>
Roberts, Bertrand Earle, A.B. 1912,	<i>Newton Centre.</i>
Sargent, Arthur Forrest, A.B. (<i>Dartmouth Coll.</i>) 1911,	<i>Pittsfield, N. H.</i>
Settle, Howard Edwin, A.B. 1913 (1912),	<i>Berne, N. Y.</i>
Smith, Francis Cullen, A.B. (<i>Boston Coll.</i>) 1909,	<i>Somerville.</i>
Taylor, John Houghton, A.B. 1913 (1912),	<i>Cambridge.</i>
Thomasson, Aaron Hood, A.B. (<i>Lincoln Univ.</i>) 1896,	<i>Boston.</i>

* Has completed work for the A.B. degree.

Tully, George Loughlin, A.B. 1912,	Milford.
Vail, Harris Holmes, A.B. (<i>Yale Univ.</i>) 1912,	Cincinnati, O.
Viets, Henry Rouse, Jr., S.B. (<i>Dartmouth Coll.</i>) 1912,	Brookline.
Waite, John Herbert, S.B. (<i>Bucknell Univ.</i>) 1911,	Lock Haven, Pa.
Weld, Stanley Burnham, A.B. (<i>Dartmouth Coll.</i>) 1912,	Winchester.
Wells, Ward Stanley, S.B. (<i>Grinnell Coll.</i>) 1909,	Nashua, Ia.
Wetherell, Bryant Davis, A.B. (<i>Williams Coll.</i>) 1912,	Holyoke.
Wilbur, George Browning, 2d, S.B. 1912,	W. Newton.
Wilder, Douglas Edwin, PH.B. (<i>Univ. of Roch- ester</i>) 1906, LL.B. (<i>Harvard Univ.</i>) 1909,	Cambridge.
Withington, Paul Richmond, A.B. 1912,	Boston.
Wyld, Russell Arthur, A.B. (<i>Dartmouth Coll.</i>) 1912,	Lawrence.

SPECIAL STUDENTS TAKING REGULAR WORK

Benet, George,	Columbia, S. C.
Berger, Harry Calvin, A.B. (<i>Univ. of Kansas</i>) 1912,	Halstead, Kan.
Calvin, Claudius Virgil,	Meadville, Pa.
Grannis, Irving Van Vliet, S.B. (<i>Univ. of Wisconsin</i>) 1912,	Menomonee, Wis.
Hatch, Floyd Frost, A.B. (<i>Univ. of Utah</i>) 1912,	Heber City, Utah.
Jackson, George Henry, Jr.	Newtonville.
Jones, Merritt La Count, S.B. (<i>Univ. of Wisconsin</i>) 1912,	Wausau, Wis.
Kerr, William John, S.B. (<i>Univ. of California</i>) 1912,	Los Angeles, Cal.
McCormick, Charles Owen, A.B. (<i>Indiana Univ.</i>) 1911,	Lafayette, Ind.
Markey, Edward Bond, M.D. (<i>Cornell Univ.</i>) 1906,	Dayton, O.
Meserve, Edwin Alonzo,	Allston.
O'Donnell, John Joseph, Jr.	E. Boston.
Petersen, Marius Smith, S.B. (<i>Univ. of Wisconsin</i>) 1910,	Milwaukee, Wis.
Ricci, James Vincent,	Providence, R. I.
Robertson, Oswald Hope, S.B. (<i>Univ. of California</i>) 1910,	Berkeley, Cal.

Shannon, William Lloyd, A.B. (*McGill Univ.*)

1909, M.D., C.M. (*ibid.*) 1911,

Vancouver, B. C.

Shortell, Joseph Henry,

Salem.

Williamson, Alexander Hamilton, S.B. (*Univ. of*

California) 1911,

Pasadena, Cal.

GRADUATES OF COLLEGES

Acadia College	1	Laval University	1
University of Alabama	1	Leland Stanford Jr. University	4
Amherst College	4	Lincoln University	1
Anatolia College	1	McGill University	1
Assiout College (Egypt)	1	McPherson College	1
Austin College	1	Malta University	1
Bates College	7	University of Minnesota	3
Boston College	9	Morningside College	1
Bowdoin College	5	Mt. Allison College	1
Brown University	14	Muhlenburg College	1
Beloit College	1	University of Nebraska	1
Bucknell University	1	University of New Brunswick	1
University of California	5	Oberlin College	1
Clark University	5	Ohio University	1
Clark College	2	Ohio Wesleyan University	1
Colby College	4	Oklahoma Agricultural and Mechanical	
Colorado College	2	College	1
University of Colorado	1	Colegio Pinillos (Colombia, S. A.)	1
Columbia University	2	University of Pittsburgh	1
Cornell College	5	Princeton University	3
Cornell University	2	University of Rochester	9
Imperial Medical College of China	1	Rock Hill College	1
Dartmouth College	15	St. John's College	1
Davidson College	1	So. Dakota State College	2
De Pauw University	3	University of So. Dakota	1
Dickinson College	1	University of Texas	1
Doane College	1	Tufts College	1
Eureka College	1	University of Southern California	1
Georgetown University	1	Ursinus College	1
Grinnell College	1	University of Utah	1
Harvard University	97	Washington State University	1
Heidelberg University	1	Williams College	6
Holy Cross College	14	University of Wisconsin	4
Howard University	1	Yale University	8
Illinois College	1		
University of Illinois	2	Total	289
Indiana University	1	Counted more than once	7
Upper Iowa University	1		
University of Kansas	6	Total Number College Graduates	282
Lafayette College	1		
Lake Forest College	1	Number of Colleges	74

COURSES FOR GRADUATES

(October 1, 1911, to June 1, 1912)

- Allen, Bradford, S.B. (*Amherst Coll.*) 1878, M.D.
 (*Harvard Univ.*) 1883, L.M. (*Univ. of Dublin*)
 1883, Nashua, N.H.
- Allen, Granville Stevens, M.D. (*Bellevue Hosp. Med.*
Coll.) 1894, Lawrence.
- Allen, William Howard, A.B. 1891, M.D. 1894, Mansfield.
- Anderson, S Wilhelm, M.D. (*Univ. of Minnesota*) 1903, Warren, Minn.
- Anthony, George Chenery, M.D. (*Boston Univ.*
Sch. of Med.) 1904, Wellesley.
- Arnold, Hannah Helen, Boston.
- Barden, George Rice, M.D. (*Bellevue Hosp. Med.*
Coll.) 1896, Providence, R.I.
- Barnes, James Arthur, A.B. (*Holy Cross Coll.*) 1895,
 M.D. (*Harvard Univ.*) 1900, Worcester.
- Bartlett, Charles Watson, M.D. (*Coll. of Phys. and*
Surg., New York) 1889, Marshfield.
- Battershall, Mary H. Wolfenden, M.D. (*Woman's*
Med. Coll. of Pennsylvania) 1879, Attleboro.
- Berry, William Christopher, M.D. (*Tufts Med. Sch.*)
 1907, Jamaica Plain.
- Bliss, William Everett, M.D. (*Illinois Univ. Med.*
Sch.) 1906, Melrose.
- Bond, Earl Danford, A.B. 1900, M.D. 1908, Waverley.
- Bond, Sarah Adams, M.D. (*Woman's Med. Coll. of*
Pennsylvania) 1891, Jamaica Plain.
- Bosworth, Alfred Willson, S.B. (*Rhode Island State*
Coll.) 1899, Brookline.
- Boutelle, Harry Clifton, M.D. 1899, Danvers.
- Breslin, John George, A.B. 1908, M.D. 1911, Charlestown.
- Bresnahan, John Francis, M.D. (*Univ. of Pennsyl-*
vania) 1910, Boston.
- Brown, Daniel Eugene, M.D. (*Hahnemann Med.*
Coll., Philadelphia) 1886, Brockton.
- Brown, Ernest William, PH.B. (*Yale Univ.*) 1897,
 PH.D. (*ibid.*) 1900, M.D. (*George Washington*
Univ.) 1906, Wollaston.
- Bryant, John Edmund, M.D. (*Dartmouth Med. Sch.*)
 1901, Haverhill.
- Bryant, Owen, A.B. 1904, Cohasset.

- Buffum, Herbert Edwin, M.D. 1897,
 Bullard, Marguerite Jane, A.B. (*Cornell Univ.*) 1902,
 M.D. (*ibid.*) 1904,
 Burgess, Charles James, M.D. (*Tufts Med. Sch.*) 1898,
 Burney, Robert Hickman, B.S. (*Univ. of Missouri*)
 1895, M.D. (*Univ. Med. Coll., Missouri*) 1901,
 Burpce, Carroll Colby, M.D. (*Boston Univ. Sch. of*
Med.) 1896,
 Butler, William Hodnett, M.D. (*Bellerue Hosp.*
Med. Coll.) 1897,
 Butterfield, George Kittredge, M.D. (*Tufts Med.*
Sch.) 1903,
 Clark, Colin Reed, M.D. (*Univ. of Pennsylvania*)
 1895,
 Clark, Edward James, M.D. (*Dartmouth Med. Sch.*)
 1901,
 Coburn, Fordyce, M.D. 1903,
 Coffin, Frank Herbert, M.D. (*Boston Univ. Sch. of*
Med.) 1900,
 Conant, Harry Weston,
 Constans, Frank Elmore, M.D. (*Hahnemann Med.*
Coll., Philadelphia) 1889,
 Crossman, Edgar Orin, M.D. (*Univ. of Vermont*)
 1887,
 Cummins, Loretta Joy, M.D. (*Tufts Med. Sch.*) 1903,
 Curtin, Charles Lester, M.D. (*Yale Univ.*) 1903,
 Curtis, William Goodwin, M.D. (*Bellerue Hosp.*
Med. Coll.) 1906,
 Cutler, James Tucker, A.B. (*Williams Coll.*) 1890,
 M.D. (*Harvard Univ.*) 1894,
 Daly, Timothy Joseph, M.D. 1897,
 Dearborn, Sam Starrett, A.B. 1894, M.D. 1898,
 Denig, Blanche Alpine, M.D. (*Woman's Med. Sch.,*
Chicago) 1891,
 Devere, Frederick Hewitt, M.D. (*Univ. of Vermont*)
 1898,
 Dodge, Ralph Oscar, M.D. (*Boston Univ. Sch. of*
Med.) 1910,
 Donaldson, James Frank, A.B. (*Tufts Coll.*) 1898,
 M.D. (*Harvard Univ.*) 1902,
 Doubleday, Charles Everett, M.D. (*Syracuse Univ.*)
 1887,
- Somerville.
 Putnam, Conn.
 Lawrence.
 Kansas City, Mo.
 Malden.
 Fall River.
 Taunton.
 Youngstown, O.
 Lowell.
 Lowell.
 Haverhill.
 Cambridge.
 Brockton.
 Lisbon, N.H.
 Allston.
 Manchester, N.H.
 Wollaston.
 Roxbury.
 Lawrence.
 Nashua, N.H.
 Boston.
 Sterling.
 Hyde Park.
 Salem.
 Penn Yan, N.Y.

- Driscoll, Daniel, M.D. (*Med. Sch. of Maine*) 1885, Portland, Me.
 Dunbar, Ruth, A.B. (*Smith Coll.*) 1908, Brookline.
 Dutton, Richard, A.B. 1898, M.D. 1901, Wakefield.
 Eastman, Eugene Bruce, M.D., C.M. (*McGill Univ.*)
 1902, Portsmouth, N.H.
 Ellis, William Alonzo, Essex.
 Emmons, Arthur Brewster, 2d, A.B. 1898, M.D. 1902, Boston.
 Fisher, Carl, S.B. (*Carleton Coll.*) 1901, M.D. (*Harvard Univ.*) 1905, Rochester, Minn.
 Flynn, John Joseph, M.D. (*Bellevue Hosp. Med. Coll.*)
 1898, Worcester.
 Ford, Daniel Frank, M.D. (*Bellevue Hosp. Med. Coll.*) 1881, Boston.
 Fox, Ralph Deems, A.B. (*Illinois Wesleyan Univ.*)
 1899, M.D. (*Univ. of Michigan*) 1903, Bloomington, Ill.
 Furlong, Francis Mohun, M.D. (*Univ. of Georgetown*) 1895, Chelsea.
 Gifford, John Pearl, A.B. (*Dartmouth Coll.*) 1894, Randolph, Vt.
 M.D. (*ibid.*) 1897,
 Gillette, Edwin Johnson, A.B. (*Williams Coll.*) 1888, Phoenix, Ariz.
 M.D. (*Univ. of Pennsylvania*) 1891,
 Good, Barton Lester, M.D. (*Hahnemann Med. Coll., Illinois*) 1904, Van Wert, O.
 Gourley, George Foster, M.D. (*Ohio Med. Univ.*)
 1903, Columbus, O.
 Grant, William Victor, M.D. (*Boston Univ. Sch. of Med.*) 1902, Lawrence.
 Hagerty, Joseph James, M.D. 1905, Norwood.
 Haight, Harry William, A.B. (*Princeton Univ.*)
 1907, M.D. (*Harvard Univ.*) 1912, Mendota, Ill.
 Hamilton, Annie Lee, M.D. (*Woman's Med. Coll., N.Y. Infirmary*) 1898, Boston.
 Hannaford, Charles William, M.D. (*Tufts Med. Sch.*)
 1900, Portsmouth, N.H.
 Hanson, William Greene, M.D. (*Boston Univ. Sch. of Med.*) 1878, Everett.
 Harkins, William Joseph, M.D. (*Univ. of Vermont*)
 1911, Quincy.
 Harnett, Edward Henry Lewis, A.B. (*St. Ann's Coll.*)
 1905, M.D. (*Tufts Med. Sch.*) 1910, Dorchester.
 Harriman, Cora Elizabeth, M.D. (*Tufts Med. Sch.*)
 1902, Framingham.

- Hart, Arthur Orrin, M.D. (*Michigan Coll. of Med. and Surg.*) 1894, Maple Rapids, Mich.
- Hart, Eugene, M.D. (*Michigan Coll. of Med. and Surg.*) 1894, Eureka, Mich.
- Heilman, Ernest Samuel, M.D. (*Univ. of Illinois*) 1902, Ida Grove, Ia.
- Hibben, Freeman Hart, M.D. (*Indiana Med. Coll.*) 1905, Indianapolis, Ind.
- Hobart, Mary Forrester, M.D. (*Woman's Med. Coll., N.Y. Infirmary*) 1884, Boston.
- Holmes, May Salona, M.D. (*Woman's Med. Coll., N.Y. Infirmary*) 1895, Worcester.
- Houser, Mary Estella, M.D. (*Howard Univ.*) 1907, Washington, D.C.
- Howard, Arthur Allison, PH.B. (*Brown Univ.*) 1905, M.D. (*Harvard Univ.*) 1909, Boston.
- Hubbell, Adelbert Merton, M.D. (*Boston Univ. Sch. of Med.*) 1889, Haverhill.
- Hunter, George Graham, S.B. (*Univ. of California*) 1901, M.D. (*ibid.*) 1906, Los Angeles, Cal.
- Ingraham, Elizabeth, M.D. (*Tufts Med. Sch.*) 1900, Somerville.
- Irving, Frederick Carpenter, A.B. 1906, M.D. 1910, Boston.
- Irwin, Archer, M.D., C.M. (*Dalhousie Univ.*) 1892, Hakalau, Hawaii.
- Jack, Lewis Harlow, M.D. 1899, W. Newton.
- Jackson, Ralph Wentworth, A.B. (*Brown Univ.*) 1889, M.D. (*Long Island Coll. Hosp.*) 1892, Fall River.
- Jones, Arthur Thomas, M.D. (*Univ. of New York*) 1896, Providence, R.I.
- Jones, William Marks, A.B. 1890, M.D. 1893, Lowell.
- Joslyn, Arthur Everett, S.B. (*Northwestern Univ.*) 1903, A.M. (*Harvard Univ.*) 1904, M.D. (*ibid.*) 1911, Lynn.
- Keith, Avis Muna, M.D. (*Ensworth Med. Coll.*) 1892, Worcester.
- Kelly, Michael, A.B. (*Holy Cross Coll.*) 1879, M.D. (*Bellevue Hosp. Med. Coll.*) 1885, A.M. (*Holy Cross Coll.*) 1896, Fall River.
- Knowles, Robert Kenelborough Black, A.B. (*Acadia Coll.*) 1897, M.D. (*Harvard Univ.*) 1902, Gloucester.
- Lane, Jennie Theodate Miner, M.D. (*Boston Univ. Sch. of Med.*) 1896, Worcester.
- Lawrence, Joseph Henry, M.D. (*Bellevue Hosp. Med. Coll.*) 1892, Brockton.
- Learned, William Turell, A.B. (*Brown Univ.*) 1882, M.D. (*Univ. of Pennsylvania*) 1885, A.M. (*Brown Univ.*) 1885, Fall River.

- Lightbody, William Russell, PH.B. (*Brown Univ.*)
1906, M.D. (*Harvard Univ.*) 1910, Manchester.
- Lynch, William Francis, A.B. (*Georgetown Univ.*)
1904, M.D. (*Harvard Univ.*) 1908, Worcester.
- MacCabe, Arthur, M.D. (*Queen's Univ.*) 1897, Gloucester.
- McCarthy, Francis Patrick, M.D. (*Tufts Med. Sch.*)
1905, Mattapan.
- McCleave, Thomas Croke, M.D. (*Cooper Med. Coll.*)
1896, Berkeley, Cal.
- Macdonald, John Clyde, M.D., C.M. (*Dalhousie Univ.*) 1895, Everett.
- McEvoy, George Albert, M.D. (*Harvard Univ.*) 1899, Dorchester.
- McLachlan, Donald Cattnach, M.D., C.M. (*McGill Univ.*) 1904, Greenland, N.H.
- McLean, John Allan, M.D. 1904, W. Somerville.
- Mahoney, Joseph John, M.D. (*Univ. of Colorado*)
1907, Denver, Colo.
- Matulaitis, Francis, M.D. (*Baltimore Med. Coll.*)
1907, Plymouth, Pa.
- May, John Richard, CH.B. (*Boston Univ.*) 1903,
M.D. (*ibid.*) 1904, Waban.
- Merritt, Louis Arthur, M.D. (*Med. Sch. of Maine*)
1893, Campello.
- Morgan, Charles Russell, M.D. (*Tufts Med. Sch.*)
1907, Boston.
- Morgan, Richard Jeffries, M.D. (*Jefferson Med. Coll.*) 1890, Van Wert, O.
- Morrison, Robert Mehard, M.D. (*Western Univ. of Pennsylvania*) 1895, Youngstown, O.
- O'Hare, James Patrick, A.B. 1908, M.D. 1911, Milton.
- O'Leary, Joseph Augustus, M.D. (*Boston Univ. Sch. of Med.*) 1887, Wakefield.
- Oliver, Everard Lawrence, M.D. (*Harvard Univ.*)
1904, Brockton.
- O'Toole, Stephen, D.V.M. (*Ohio State Univ.*) 1908, Shawnee, O.
- Parker, Harold Francis, M.D. (*Tufts Med. Sch.*)
1909, Watertown.
- Patch, Arthur Lionel, A.B. (*Brown Univ.*) 1904,
M.D. (*Harvard Univ.*) 1909, Stoneham.
- Pease, Frank David, M.D. (*Jefferson Med. Coll.*)
1893, Missoula, Mont.
- Peterson, John Adna, M.D. (*Univ. of Vermont*) 1896, Hingham Centre.

- Pratt, Edwin Francis, A.B. (*Bowdoin Coll.*) 1897,
M.D. (*Med. Sch. of Maine*) 1900, Portland, Me.
- Prenn, Joseph, M.D. (*Tufts Med. Sch.*) 1908, Boston.
- Pulsifer, Walter Hall, M.D. (*Tufts Med. Sch.*) 1908, Whitman.
- Randall, George Merrill, M.D. (*Bowdoin Coll.*) 1889, Lowell.
- Redmond, Thomas Henry, M.D. (*Baltimore Med. Coll.*) 1897, Lawrence.
- Reed, Marvin Warren, A.B. (*Franklin and Marshall Coll.*) 1900, A.M. (*ibid.*) 1903, M.D. (*Jefferson Med. Coll.*) 1903, Alexandria, Pa.
- Remington, John Alfred, M.D. (*Bellevue Hosp. Med. Coll.*) 1891, Central Falls, R.I.
- Rice, Henry William, A.B. (*Univ. of South Carolina*) 1893, M.D. (*Med. Coll. of South Carolina*) 1896, Columbia, S.C.
- Richardson, Henry Barber, A.B. 1910, Boston.
- Roberts, Isaac Lincoln, A.B. (*Selma Univ.*) 1890, Boston.
- M.D. (*Leonard Med. Sch.*) 1894, Worcester.
- Rochette, Edward Charles, M.D. 1903, Cambridge.
- Sennott, John Ralph, M.D. 1902, Boston.
- Seymour, Malcolm, M.D. 1904, Boston.
- Shapira, Victor Isaiah, M.D. (*Baltimore Univ. Sch. of Med.*) 1905, Boston.
- Small, Amos Elwyn, M.D. (*Med. Sch. of Maine*) 1895, Winter Harbor, Me.
- Smith, Hervey Lewis, M.D. 1903, Springfield.
- Smith, John Jay, M.D. (*Howard Univ.*) 1908, Cambridge.
- Smith, Myrtle, M.D. (*Tufts Med. Sch.*) 1905, Worcester.
- Spaulding, Edith Rogers, M.D. (*Tufts Med. Sch.*) 1909, Stonybrook.
- Spitz, Gertrude Theresa, A.B. (*Radcliffe Coll.*) 1907, Brookline.
- Spoon, Yan, Boston.
- Stamp, Harley, A.B. (*Mt. Union Coll.*) 1896, A.M. (*ibid.*) 1903, Alliance, O.
- Stanley, William Alexander, M.D. (*Cleveland Med. Coll.*) 1895, Medina, O.
- Stanwood, Frederic Arthur, A.B. (*Bowdoin Coll.*) 1902, M.D. (*Harvard Univ.*) 1907, Boston.
- Strong, James Henry, M.D. 1892, E. Boston.
- Strobell, Charles William, M.D. (*Univ. of Vermont*) 1882, Rutland, Vt.
- Sullivan, Andrew Joseph, M.D. (*Tufts Med. Sch.*) 1909, Brockton.

- Sumner, James Batcheller, A.B. 1910,
Swaim, Loring Tiffany, A.B. 1905, M.D. 1909,
Taylor, Joseph, M.D. (*Dartmouth Med. Sch.*) 1893,
Tenney, William Northend, M.D. 1895,
Turner, Edward Lincoln Dwight,
Tuttle, Schuyler Simpson, M.D. (*Rush Med. Coll.*)
1893,
Warren, Alva Harding, M.D. 1900,
Warden, Frank Ryan, M.D. (*Coll. of Phys. and
Surg., Baltimore*) 1889,
Westcott, Clement Plummer, M.D. (*Tufts Med.
Sch.*) 1909,
Weston, Henry Reuben, A.B. (*Dartmouth Coll.*)
1900, M.D. (*Bellevue Hosp. Med. Coll.*) 1903,
- Canton Junction.
Cambridge.
Manchester, N.H.
Canton.
Providence, R.I
Van Wert, O.
Everett.
Newport, R.I.
Woodfords, Me
Windsor, Vt.

THE SUMMER SCHOOL OF MEDICINE

(June 1 to October 1, 1912)

Albee, Kenneth Field, PH.B. (<i>Brown Univ.</i>) 1910,	<i>Wollaston.</i>
Alderdyce, William Wesley, M.D. (<i>Toledo Med. Coll.</i>) 1900,	<i>Toledo, O.</i>
Anderson, Isadore, A.B. (<i>Univ. of Missouri</i>) 1904, M.D. (<i>ibid.</i>) 1909,	<i>Kansas City, Mo.</i>
Andrews, Sumner Cheever, A.B. 1910,	<i>Gloucester.</i>
Baldwin, John Cook, S.B. (<i>Hamilton Coll.</i>) 1910,	<i>Brooklyn, N. Y.</i>
Barnes, William Samuel, PH.B. (<i>Yale Univ.</i>) 1895, M.D. (<i>ibid.</i>) 1897,	<i>New Haven, Conn.</i>
Beard, Archibald Hildreth, A.B. (<i>Univ. of Kansas</i>) 1912,	<i>La Junta, Colo.</i>
Bennett, Adolphus Bogardus, Jr., M.D. (<i>Columbian Univ.</i>) 1901,	<i>Washington, D. C.</i>
Berger, Harry Calvin, A.B. (<i>Univ. of Kansas</i>) 1912,	<i>Halstead, Kan.</i>
Bernstein, Harry Saul, A.B. 1904, M.D. 1908,	<i>Roxbury.</i>
Binkley, Roy Spitler, M.D. (<i>Starling Ohio Med. Coll.</i>) 1911,	<i>Columbus, O.</i>
Bitzer, Emory West, M.D. (<i>Univ. of Virginia</i>) 1903, A.B. (<i>Washington and Lee Univ.</i>) 1907,	<i>Tampa, Fla.</i>
Blanchard, Howard Everett, M.D. (<i>Jefferson Med. Coll.</i>) 1905,	<i>Providence, R. I.</i>
Bond, Sterling Price, M.D. (<i>Univ. of Arkansas</i>) 1912,	<i>Little Rock, Ark.</i>
Brennan, James Thomas, A.B. (<i>Rock Hill Coll.</i>) 1909,	<i>Clarksburg, W. Va.</i>
Brigham, Francis Gorham, S.B. (<i>Colgate Univ.</i>) 1905, M.D. (<i>Harvard Univ.</i>) 1909,	<i>Boston.</i>
Brougham, Edward Jones, M.D. (<i>Northwestern Univ.</i>) 1887,	<i>Chicago, Ill.</i>
Buchanan, John Ure, M.D. (<i>Univ. of Pennsylvania</i>) 1911,	<i>Youngstown, O.</i>
Budlong, Martin Salisbury, A.B. (<i>Brown Univ.</i>) 1890, A.M. (<i>ibid.</i>) 1892, M.D. (<i>Hahnemann Med. Coll., Philadelphia</i>) 1895,	<i>Providence, R. I.</i>
Bumpus, Hermon Carey, Jr., PH.B. (<i>Brown Univ.</i>) 1912,	<i>Madison, Wis.</i>
Butler, Patrick Francis, M.D. 1903,	<i>Dorchester.</i>
Callen, Russell, M.D. (<i>Tulane Univ.</i>) 1903,	<i>Birmingham, Ala.</i>

- Calloway, Arthur William, M.D. (*Chicago Homeopathic Med. Coll.*) 1895, *Asheville, N. C.*
 Cartin, Harry James, M.D. (*Jefferson Med. Coll.*) 1901, *Johnstown, Pa.*
 Caton, Russell Jay, *Columbus, O.*
 Chatterjee, Atal Chaud, (*The Central Hindu Coll., Benares, India*) 1908, *Calcutta, India.*
 Cheever, Austin Walter, A.B. 1910, *Mattapan.*
 Cherrington, John Summerfield, M.D. (*Starling Ohio Med. Coll.*) 1897, *Logan, O.*
 Clarke, Harry Carver, M.D. 1910, *Lynn.*
 Clemens, Clayton Roy, *Winchester.*
 Clement, Lucian Orulle, S.B. (*Univ. of Minnesota*) 1899, M.D. (*ibid.*) 1902, *Rocky Hill, N. J.*
 Cohen, Joseph Powitzer, A.B. 1909, *Newburgh, N. Y.*
 Cook, Ward Hance, A.B. (*Univ. of Kansas*) 1909, A.M. (*ibid.*) 1910, *Kansas City, Mo.*
 Cornell, William Paterson, M.D. (*Med. Coll. of the State of South Carolina*) 1898, *Charleston, S. C.*
 Cushing, Herbert Howard, M.D. (*Königliche Bayr. Ludwig-Maximilian Universität, Munich*) 1898, M.D. (*Jefferson Med. Coll.*) 1899, *Philadelphia, Pa.*
 Cutler, Charles Newton, M.D. 1898, *Chelsea.*
 Daly, Timothy Joseph, M.D. 1897, *Lawrence.*
 Das, Premananda, PH.C. (*Univ. of Michigan*) 1911, S.M. (*ibid.*) 1912, *Calcutta, India.*
 Davidson, William Ruston, S.B. (*Wabash Coll.*) 1896, M.D. (*Rush Med. Coll.*) 1899, *Evansville, Ind.*
 Davis, Minot Flagg, M.D. (*Univ. of the South*) 1901, *Boston.*
 Dean, John McHale, M.D. (*Washington Univ.*) 1896, *St. Louis, Mo.*
 Dearborn, Henry Follansby, M.D., C.M. (*McGill Univ.*) 1907, *Lawrence.*
 Denny, Francis Parkman, A.B. 1891, M.D. 1895, *Brookline.*
 Dodd, Verne Adams, M.D. (*Ohio Med. Coll.*) 1903, *Columbus, O.*
 Dodge, Frederick Wilder, M.D. (*Boston Univ. Med. School*) 1891, *Hyde Park.*
 Dooley, Marion Sylvester, A.B. (*Univ. of Missouri*) 1907, *Syracuse, N. Y.*
 Doubleday, Charles Everett, M.D. (*Syracuse Univ.*) 1897, *Penn Yan, N. Y.*

- Dugdale, Allison Harold, S.B. (*Univ. of Nebraska*)
1911, Omaha, Neb.
- Durrett, James Johnson, S.B. (*Univ. of Alabama*)
1908, S.M. (*ibid.*) 1909, PH.G. (*ibid.*) 1910, Northport, Ala.
- Dwyer, John Edward, Jr., M.D. (*Tufts Med. School*)
1911, Cambridge.
- Eames, Anna Lucille, Evanston, Ill.
- Elcbash, Clarence Couch, M.D. (*Tulane Univ.*)
1909, Selma, Ala.
- Eversole, George Edwin, A.B. 1907, Buigen, Wash.
- Eyerly, Tema Leclerc, A.B. (*Univ. of Kansas*) 1905,
A.M. (*ibid.*) 1909, Nortonville, Kan.
- Farr, Clifford Bailey, A.B. (*Haverford Coll.*) 1894,
M.D. (*Univ. of Pennsylvania*) 1898, Philadelphia, Pa.
- Fauster, John Ullrich, M.D. (*Toledo Med. Coll.*)
1897, Paulding, O.
- Fayerweather, Roades, A.B. (*Harvard Univ.*) 1899,
M.D. (*Johns Hopkins Univ.*) 1903, Baltimore, Md.
- Fernández, Miguel Joaquin, A.B. (*Colegio Penillos,*
Mompox, Colombia, S.A.) 1907, Mompox, Colombia, S.A.
- Field, William Hill, M.D. (*Univ. of Pennsylvania*)
1898, Evansville, Ind.
- Fishman, Harry, Cambridge.
- Forman, Jonathan, A.B. (*Ohio State Univ.*) 1910, Columbus, O.
- Fornell, Carl Hernfrid, A.B. 1910, Quincy.
- Foss, John William, M.D. 1899, Phoenix, Ariz.
- Friedman, Nachem, M.D. (*Tufts Med. Sch.*) 1909, Boston.
- Gageby, Lenore Hamilton, M.D. (*Woman's Med.*
Coll. of Pennsylvania) 1901, Newcastle, Pa.
- Gallagher, John Charles, M.D. (*Medico Chirurgical*
Coll., Philadelphia) 1908, Shenandoah, Pa.
- Gardner, William Edwin, A.B. (*Univ. of Pittsburgh*)
1909, Pittsburgh, Pa.
- Garhart, Manch Neville, Columbus, O.
- Garner, Albert Rowland, S.B. (*Bucknell Univ.*)
1899, S.M. (*ibid.*) 1903, M.D. (*Hahnemann Med.*
Coll.) 1902, Morristown, Pa.
- Gillette, George Henry, A.B. (*Cornell Coll.*) 1910, Bayport, N. Y.
- Gourley, Harry Robert, M.D. (*Ohio Med. Coll.*) 1902, Punxsutawney, Pa.
- Gray, Horace, A.B. 1909, Boston.
- Grisier, Otto Woodson, A.B. (*Indiana Univ.*) 1910, Columbia City, Ind.
- Guerrant, Edward Putney, Wilmore, Ky.

- Hagerman, David Benjamin,
Hall, Mabel Goodwin,
Hambrook, Augustus Joseph, M.D. (*Albany Med. Coll.*) 1907,
Hamilton, Burke Coonley, S.B. (*Syracuse Univ.*) 1903, M.D. (*ibid.*) 1906,
Hancock, Albert William, M.D. 1904,
Hardin, Avell Duncan, M.D. (*Baylor Univ.*) 1909,
Harper, William Heston, M.D. (*Ohio Med. Coll.*) 1901,
Harper, William Wade, M.D. (*Tulane Univ.*) 1891,
Harris, Arthur Buckner, M.D. (*Univ. of Virginia*) 1902,
Harris, Isaac Burt, M.D. (*Starling Ohio Med. Coll.*) 1900,
Harrison, William Groce, S.B. (*Alabama Polytechnic Inst.*) 1890, M.D. (*Univ. of Maryland*) 1893,
Hatch, Floyd Frost, A.B. (*Univ. of Utah*) 1912,
Hayman, Stuart Roberts,
Hayward, Harrison Henry, M.D. (*Univ. of Vermont*) 1900,
Held, Charles Edward, M.D. (*Western Reserve Univ.*) 1898,
Higgins, Harold Leonard, A.B. 1907,
Higgins, Montgomery, M.D. (*Columbian Univ.*) 1904,
Hills, Laura Heath, M.D. (*Woman's Med. Coll. of Pennsylvania*) 1896,
Hollrigl, Joseph,
Horton, Elmer Grant, S.B. (*Cornell Univ.*) 1892, M.D. (*Starling Ohio Med. Coll.*) 1906,
Hosley, Walter Alexis, A.B. 1900, M.D. 1904,
Howard, Frederic Hollis, M.D. (*Univ. of Pennsylvania*) 1898,
Hunter, James Wilson, Jr., S.B. (*Univ. of Virginia*) 1899, S.M. (*ibid.*) 1899, M.D. (*ibid.*) 1901,
Hyde, Harold Valmore, B.S. (*Dartmouth Coll.*) 1910,
Judd, Orange King, M.D. (*Univ. of Arkansas*) 1905,
Karshner, Clyde Fenworth, A.B. (*Univ. of Michigan*) 1905, M.D. (*ibid.*) 1908,
Kazanjian, Morris Nerses, A.B. (*Central Turkey Coll.*) 1902,
Wanseeon, O.
Augusta, Me.
Troy, N. Y.
Goshen, N. Y.
Lawrence.
Dallas, Tex.
Columbus, O.
Selma, Ala.
Birmingham, Ala.
Columbus, O.
Birmingham, Ala.
Heber City, Utah.
Brookline.
Randolph, Vt.
Akron, O.
E. Saugus.
Washington, D. C.
Willimantic, Conn.
Cambridge.
Columbus, O.
Springfield.
Williamstown.
Norfolk, Va.
Lynn.
Little Rock, Ark.
Big Rapids, Mich.
Somerville.

- Keller, Charles, *St. Louis, Mo.*
 Ketchum, Wesley Harrington, M.D. (*Cleveland Homeopathic Med. Coll.*) 1904, *Lisbon, O.*
 King, Thomas Byron, A.B. (*Emory Coll.*) 1907, *Sandersville, Ga.*
 M.D. (*Atlanta Sch. of Med.*) 1911,
 Kleinpell, Henry Herman, M.D. (*Rush Med. Coll.*) 1900, *Chicago, Ill.*
 Kurth, Gustave Emil, M.D. 1901, *Lawrence.*
 Lachaine, Edmond, M.D. (*Laval Univ.*) 1904, *Hinsdale, N. H.*
 Leavitt, Peirce Henry, S.B. 1910, *Cambridge.*
 Lehman, Edwin Partridge, A.B. (*Williams Coll.*) 1910, *Redlands, Cal.*
 Levi, Morton Paul, *Cincinnati, O.*
 Lockwood, Cyrenus Bruce, M.D. (*Univ. of Michigan*) 1912, *Detroit, Mich.*
 Long, James Harmount, A.B. (*Ohio Wesleyan Univ.*) 1904, A.M. (*ibid.*) 1907, *Cambridge.*
 Lunt, Laurence Kirby, A.B. 1909, *Colorado Springs, Colo.*
 Lupien, Henry John, M.D. (*Tufts Med. Sch.*) 1908, *Brockton.*
 Lyman, Henry, A.B. 1901, M.D. 1912, *Ponkapoag.*
 McCall, Daniel Thompson, A.B. (*State Univ. of Alabama*) 1887, M.D. (*Louisville Med. Coll.*) 1894, *Mobile, Ala.*
 McConagha, Arthur Blanchard, A.B. (*Muskingum Coll.*) 1905, M.D. (*Starling Ohio Med. Coll.*) 1909, *Ashley, O.*
 McGinn, Arthur Francis, A.B. (*Brown Univ.*) 1892, *Providence, R. I.*
 M.D. (*Columbia Univ.*) 1895, *Eureka, Ill.*
 McGuire, Joseph Hoshal, A.B. (*Eureka Coll.*) 1911, *Memphis, Tenn.*
 McInnis, Millie Maurice,
 McKay, Roy Hayman, M.D. (*Univ. of Cincinnati*) 1906, *Akron, O.*
 McKeage, Robert Burns, M.D. (*Medico Chirurgical Coll.*) 1893, *Scranton, Pa.*
 Magoon, Charles Elmer, Jr., A.B. (*Morningside Coll.*) 1910, *Sioux City, Ia.*
 Mahoney, John Lewis, M.D. (*Boston Univ. Sch. of Med.*) 1898, *Boston.*
 Mangum, Charles Staples, A.B. (*Univ. of North Carolina*) 1891, M.D. (*Jefferson Med. Coll.*) 1894, *Chapel Hill, N. C.*
 Marshall, Fremont MaKensie, M.D. (*Western Reserve Univ.*) 1889, *Coshocton, O.*
 Martin, Ann Louise, S.B. (*Univ. of California*) 1908, *Berkeley, Cal.*

- Marvin, Frank William, A.B. 1910, *Cambridge.*
 Mathews, Robert Francis, M.D. (*Univ. of Pennsylvania*) 1905, *Worcester.*
 Mayberry, Frank Eugene, M.D. (*Dartmouth Coll.*) 1885, *Boston.*
 Mayfield, Surry Foster, M.D. (*Tulane Univ.*) 1896, *Tuscaloosa, Ala.*
 Maynard, Frank Baldwin, M.D. (*Albany Med. Coll.*) 1896, *Rochester, N. Y.*
 Meyer, Arthur Louis, A.B. (*Beloit Coll.*) 1905, M.D. (*Univ. of Pennsylvania*) 1909, *Garnaville, Ia.*
 Miller, Amy Phillips, *Boston.*
 Mitchell, William, M.D., C.M. (*McGill Univ.*) 1894, *Needham Heights.*
 Mooney, Robert Copeland, M.D. (*Albany Med. Coll.*) 1908, *Gloversville, N. Y.*
 Morgan, Harold James, M.D. (*Coll. of Phys. and Surg., New York*) 1895, *Toledo, O.*
 Morin, Jacob Mauritz, M.D. (*Long Island Coll. Hosp. Med. Sch.*) 1899, *Felton Oriente, Cuba.*
 Morse, Jean Whitney, M.D. (*Univ. of Michigan*) 1897, *Ensenada, Porto Rico.*
 Moursund, Walter Henrik, M.D. (*Univ. of Texas*) 1906, *Dallas, Tex.*
 Mumpower, Daniel Leeper, A.M. (*Yale Univ.*) 1903, M.D. (*Vanderbilt Univ.*) 1912, *Doniphan, Mo.*
 Munro, Donald, A.B. 1912, *Boston.*
 Munroe, Harrington Bennett, A.B. (*Queen's Univ., Canada*) 1898, M.D. (*McGill Univ.*) 1903, *Lynn.*
 Murphy, Frank Vincent, *Marion, O.*
 Murray, John Lovell, M.D. (*Detroit Coll. of Med.*) 1900, *Toledo, O.*
 Myers, Mae Lichtenwalner, M.D. (*Woman's Med. Coll. of Pennsylvania*) 1905, *Germantown, Pa.*
 Neptune, John Wesley, M.D. (*Kansas City Med. Coll.*) 1894, *Salina, Kan.*
 Nichols, Robert Henry, *Boston.*
 Nisbet, Thomas Walker, Jr. *Upland, Cal.*
 Norton, Thomas Joseph, A.B. (*Holy Cross Coll.*) 1901, M.D. (*Jefferson Med. Coll.*) 1905, *Pittsfield.*
 Oberlin, Thomas William, M.D. (*Northwestern Univ. Med. Sch.*) 1898, *Hammond, Ind.*
 Ogden, Mahlon Dickerson, M.D. (*Univ. of Arkansas*) 1904, *Little Rock, Ark.*

- Painter, Burton Charles, M.D. (*Univ. of Pittsburgh*) 1905, *New Brighton, Pa.*
- Park, Frank Stewart, A.B. (*Univ. of Toronto*) 1909, *Toronto, Canada.*
M.B. (*ibid.*) 1911,
- Patty, Louis Greenlee, D.V.M. (*Iowa Agricultural Coll.*) 1887, M.D. (*Jefferson Med. Coll.*) 1893, *Carroll, Ia.*
- Perkins, Thomas Tounge, M.D. (*Boston Univ. Med. Sch.*) 1898, M.D. (*Harvard Univ.*) 1901, *Cliftondale.*
- Phelps, Wilbur Moorehead, M.D. (*George Washington Univ.*) 1903, *Staunton, Va.*
- Pierce, Franklin Argile, M.D. (*Tulane Univ.*) 1904, *Dallas, Tex.*
- Pleadwell, Frank Lester, M.D. 1896, *Brooklyn, N. Y.*
- Price, Walter, M.D. (*George Washington Univ.*) 1910, *Washington, D. C.*
- Prinz, Hermann, D.D.S. (*Univ. of Michigan*) 1896, *St. Louis, Mo.*
M.D. (*Barnes Med. Sch., St. Louis*) 1901, A.M. (*Univ. of Michigan*) 1912, *Manchester.*
- Putnam, Elizabeth Lowell, *Providence, R. I.*
- Raia, Joseph Ernest, A.B. (*Brown Univ.*) 1911, *St. Louis, Mo.*
- Rassieur, Louis, M.D. (*Marion-Sims Med. Coll.*) 1899, *Mancheater.*
- Reed, Marvin Warren, A.B. (*Franklin and Marshall Coll.*) 1900, A.M. (*ibid.*) 1903, M.D. (*Jefferson Med. Coll.*) 1903, *Providence, R. I.*
- Reichelderfer, Vest Deesbach, *St. Louis, Mo.*
- Rice, Clark Hilton, Jr., M.D. (*Tulane Univ.*) 1903, *South Fork, Pa.*
- Roitman, Abraham George, *Amanda, O.*
- Rubison, Ray Haskins, PH.B. (*Syracuse Univ.*) 1903, M.D. (*ibid.*) 1907, *New Orleans, La.*
- Ruble, Wells Allen, S.B. (*American Med. Missionary Coll.*) 1897, M.D. (*ibid.*) 1906, *E. Boston.*
- Ruffin, Sterling, M.D. (*Columbian Univ.*) 1890, *Monroe, N. Y.*
- Rupert, Mary Priestley Sheriff, M.D. (*Woman's Med. Coll. of Pennsylvania*) 1904, *Loma Linda, Cal.*
- Ruthenberg, Erich, M.D. (*Rush Med. Coll.*) 1890, *Washington, D. C.*
- Saad, Abdul Malik, *Philadelphia, Pa.*
- Savage, Francis Joseph, M.D. (*Univ. of Minnesota*) 1901, *Chicago, Ill.*
- Schepeler, Cortlandt Whitehead, *Tehel Barood, Egypt.*
- Seguro, Joseph Otto, M.D. (*Tulane Univ.*) 1910, *St. Paul, Minn.*
- Shank, Everett William, A.B. (*Oberlin Coll.*) 1902, *Ann Arbor, Mich.*
- Sharpe, John Semple, M.D. (*Univ. of Pennsylvania*) 1903, *Logtown, Miss.*
- Dayton, O.*
- Bryn Mawr, Pa.*

- Sharry, Charles Francis, A.B. 1910,
 Silvester, Richard Lee, S.B. (*Maryland Agricultural Coll.*) 1908,
 Slobodkin, Simon Harris,
 Southworth, John Deane, A.B. (*Kenyon Coll.*) 1911,
 Stamp, Harley, A.B. (*Mt. Union Coll.*) 1896, A.M. (*ibid.*) 1903,
 Stark, George William, M.D. (*Syracuse Univ.*) 1906,
 Stevens, Carl Hervey, M.D. (*Med. Sch. of Maine*) 1911,
 Stitt, Edward Rhodes, A.B. (*Univ. of South Carolina*) 1885, M.D. (*Univ. of Pennsylvania*) 1889,
 Stoddard, James Leavitt, A.B. 1910,
 Streett, Hermon, M.D. (*Ohio Med. Coll.*) 1904,
 Stubbles, George Hamilton, M.D. (*Coll. of Phys. and Surg., Atlanta*) 1895,
 Taylor, Charles Quintard,
 Taylor, William Xerxes, M.D. (*Cleveland Coll. of Phys. and Surg.*) 1903,
 Thomasson, Aaron Hood, A.B. (*Lincoln Univ.*) 1896,
 Titus, Henry Woodruff, A.B. (*Williams Coll.*) 1898, M.D. (*Columbia Univ. Coll. of Phys. and Surg.*) 1902,
 Tomkies, James Scott, A.B. (*Tulane Univ.*) 1903, M.D. (*Harvard Univ.*) 1908,
 Toomey, Thomas Noxon, A.B. (*Catholic Univ. of America*) 1911,
 Towne, Edward Bancroft, A.B. 1906,
 Tracy, Henry Carroll, A.B. (*Dartmouth Coll.*) 1902, A.M. (*Brown Univ.*) 1905, PH.D. (*ibid.*) 1910,
 Turner, John Calvin, Jr., S.B. (*Davidson Coll.*) 1908, A.M. (*ibid.*) 1909,
 Uhlemeyer, Henry Adolph, M.D. (*Homeopathic Med. Coll. of Missouri*) 1900,
 Underhill, Elizabeth Colden, M.D. (*Cornell Univ.*) 1900,
 Van Fossen, Jesse Allen, M.D. (*Ohio Med. Coll.*) 1893,
 Vinson, John Clifford, M.D. (*Atlanta Sch. of Med.*) 1906,
 Somerville.
 Aquasco, Md.
 Malden.
 Glendale, O.
 Alliance, O.
 Syracuse, N. Y.
 Brunswick, Me.
 Washington, D. C.
 Northampton.
 Columbus, O.
 Birmingham, Ala.
 Atlanta, Ga.
 Youngstown, O.
 Boston.
 New Rochelle, N. Y.
 Dallas, Tex.
 St. Louis, Mo.
 Palo Alto, Cal.
 Chicago, Ill.
 Camilla, Ga.
 St. Louis, Mo.
 So. Hadley.
 Columbus, O.
 Tampa, Fla.

Walsh, Thomas Nelson, M.D. (<i>McGill Univ.</i>) 1892,	<i>Hawkeye, Ia.</i>
Walton, Frank, M.D. (<i>Vanderbilt Univ.</i>) 1899,	<i>Mulga, Ala.</i>
Ward, John Hester, PH.G. (<i>Univ. of the South</i>) 1899, M.D. (<i>ibid.</i>) 1900.	<i>Tuscaloosa, Ala.</i>
Wernick, Benzion G., M.D. (<i>Tufts Med. Sch.</i>) 1903,	<i>Boston.</i>
Withington, Paul, A.B. 1909,	<i>Cambridge.</i>
Whiteside, Margaret, M.D. (<i>Woman's Med. Coll. of</i> <i>Pennsylvania</i>) 1912,	<i>Richburg, S. C.</i>
Willis, George Stuart, M.D. (<i>New York Homeo-</i> <i>pathic Med. Coll.</i>) 1899,	<i>Morristown, N. J.</i>
Wilson, David, A.B. (<i>Cornell Univ.</i>) 1905, M.D. (<i>ibid.</i>) 1907,	<i>Amsterdam, N. Y.</i>
Winchester, Harold Eugene, S.B. (<i>Dartmouth</i> <i>Coll.</i>) 1910,	<i>Bismarck, No. Dak.</i>
Wolcott, Allen Moore, M.D. (<i>Univ. of California</i>) 1907,	<i>Oakland, Cal.</i>
Woods, Arthur Daniel, M.D. (<i>State Univ. of Iowa</i>) 1906,	<i>State Center, Ia.</i>
Wright, Halstead Robert, D.D.S. (<i>Starling Ohio</i> <i>Med. Coll.</i>) 1895, M.D. (<i>ibid.</i>) 1910,	<i>Columbus, O.</i>
Wright, Wade Stanley, S.B. (<i>Univ. of Pittsburgh</i>) 1910,	<i>Pittsburgh, Pa.</i>
Wylie, Charles Robert, A.B. (<i>Princeton Univ.</i>) 1885, M.D. (<i>Univ. of Pennsylvania</i>) 1897,	<i>Pottstown, Pa.</i>
Yarian, Norman Carey, S.B. (<i>Hiram Coll.</i>) 1894, M.D. (<i>Cleveland Coll. of Phys. and Surg.</i>) 1896,	<i>Cleveland, O.</i>

SUMMARY

CANDIDATES FOR THE DEGREE OF DOCTOR OF PUBLIC

HEALTH 3

CANDIDATES FOR THE DEGREE OF DOCTOR OF MEDICINE

FOURTH CLASS 57

THIRD CLASS 65

SECOND CLASS 78

FIRST CLASS 69

SPECIAL STUDENTS 18

TOTAL 290

IN COURSES FOR GRADUATES, OCTOBER 1, 1911, TO

JUNE 1, 1912 156

IN SUMMER COURSES, JUNE 1 TO OCTOBER 1, 1912 . . . 218

TOTAL STUDENTS OCT. 1, 1911, to OCT. 1, 1912 . . . 664

ANNOUNCEMENT FOR 1913-14

The next session of the Medical School begins September 22, 1913. All students are required to register at the Dean's office on this day. Students registering in the Medical School for the first time will meet in Room 205 in the Administration Building of the Harvard Medical School, on Monday, the 22d of September, at 10 A.M. Students desiring to enter the Harvard Medical School in the first-year class, or with advanced standing, should write prior to this time to the Secretary of the Harvard Medical School, in regard to conditions for admission and the applicant's ability to meet these.

CALENDAR

1913.

- Sept. 15, Monday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 20, Saturday.* Examination in Chemistry for admission.
- Sept. 22, Monday.* **Academic Year begins.** Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 13, Monday.* Columbus Day: a holiday.
- Nov. 1, Saturday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 27, Thursday.* Thanksgiving Day: a holiday.
- Dec. 1, Monday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

RECESS FROM DEC. 23, 1913, TO JAN. 2, 1914, INCLUSIVE

1914.

- Jan. 1, Thursday.* Last day for receiving dissertations for the Boylston Medical Prizes.
- Jan. 15, Thursday.* Last day for receiving applications from students in the Professional Schools to be qualified for the degrees of Ph.D. and A.M. in 1914.
- Jan. 28, Wednesday.* Mid-year Examinations begin.
- Jan. 31, Saturday.* Payment of the second instalment of the tuition-fee is required on or before this date.

- Feb. 2, Monday.* **Second half-year begins.**
- Feb. 23, Monday.* Washington's Birthday : a holiday.
- April 1, Wednesday.* Last day for receiving dissertations for the Bowdoin Prizes.

RECESS FROM APRIL 19 TO APRIL 25, INCLUSIVE

- May 1, Friday.* Last day for receiving dissertations for the Dante, Toppan, and Sumner Prizes.
- May 1, Friday.* Last day for receiving applications for the Bullard Fellowships.
- May 1, Friday.* Last day for receiving applications for Scholarships for 1914-15 (except the Cheever and Hayden Scholarships).
- May 1, Friday.* Last day for receiving applications of candidates for the degree of M.D. in 1914.
- May 30, Saturday.* Memorial Day : a holiday.
- June 1, Monday.* Examinations begin.
- June 13, Saturday.* Examination in Chemistry for admission.
- June 18, Thursday.* **Commencement.**

SUMMER VACATION, FROM COMMENCEMENT TO SEPTEMBER 27, INCLUSIVE

- Sept. 21, Monday.* Examinations begin for applicants for advanced standing, and for men previously conditioned.
- Sept. 20, Saturday.* Examination in Chemistry for admission.
- Sept. 28, Monday.* **Academic Year begins.** Registration of Students. Payment of the first instalment of the tuition-fee is required on or before this date.
- Oct. 12, Monday.* Columbus Day : a holiday.
- Nov. 2, Monday.* Last day for receiving essays for the William H. Thorndike Prize.
- Nov. 26, Thursday.* Thanksgiving Day : a holiday.
- Dec. 1, Tuesday.* Last day for receiving applications for the Cheever and Hayden Scholarships.

JUN 1965

WESBY

